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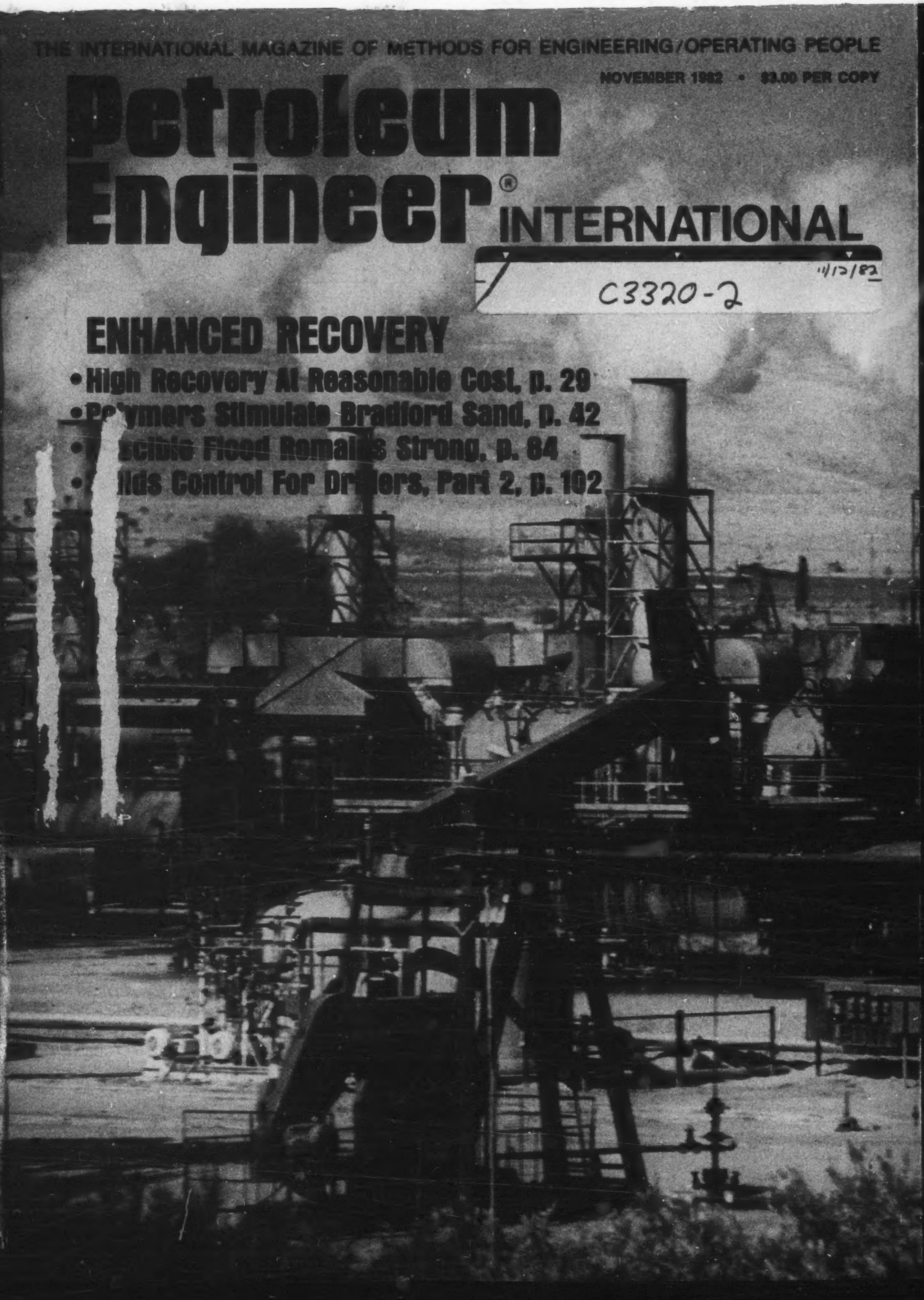

ENHANCED RECOVERY

- High Recovery At Reasonable Cost, p. 29
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Petroleum Engineer® INTERNATIONAL

The international magazine of methods for engineering/ operating people

NOVEMBER 1982 NUMBER 13 VOLUME 54

ABOUT THE COVER: Eight 50-million-Btu/hr steam generators are shown at Texaco's San Ardo field in California, with a flue gas recirculation system at left foreground. See page 29 for related story. (Cover photo by Jan R. Golon, Texaco Inc.)

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29 **Engineering Expertise Ups San Ardo Efficiency**

by W. B. Bleakley, Editor. Mature parts of the Aurignac reservoir have given up more than 60% of the original oil in place. Engineers are confident, however, that overall recovery can be raised to 70% or more.

42 **Micellar-Polymer Flood Tested In Bradford Field**

by Wayne R. Hause, Godsey-Earlougher; Gerald W. Haws, Marathon Oil; and Philip S. Ondrusek, Pennzoil Exploration and Production. The micellar slug's efficiency was probably impaired by tightness of the rock.

70 **N_2-Driven LPG Achieves Miscibility At High Temperatures**

by Larry Carlisle, Mike Montes Jr., Scott Reeves, and Paul B. Crawford, Texas A&M University. Miscible displacement can be achieved at temperatures higher than the critical temperature of propane.

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by W. B. Bleakley, Editor. Larger amounts of miscible gas could be injected into the reservoir by burning the same amount of hydrocarbon gas, and additional benefit could be gained by firing steam boilers.

96 **What's New In Enhanced Recovery**

Products applicable to enhanced recovery are available from a number of suppliers. Brief descriptions of some of these products are presented, along with opportunities for readers to send for additional information.

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NEXT ISSUE: The Offshore Operations Report in the November 15 issue of PETROLEUM ENGINEER INTERNATIONAL will focus on operational innovations and basic research.

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116 Shell Pushes Ahead In The Williston Basin

by Steven D. Moore, Drilling Editor. One of the biggest problems continues to be washout of salt sections, even though the drilling mud is super-saturated. Fairly high downhole temperatures lead to undersaturation.

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Stacked Rigs Approach 2,500-Mark

There are more rigs stacked in the U.S. than were drilling only 3 years ago.

Statistics bandied about at last month's meeting of the Independent Petroleum Association of America indicate that 2,419 rigs were idle in mid-August. The average rig count for 1979 was 2,176. And, except for 1980 and 1981, you have to go all the way back to 1957 to find an average rig count higher than the number of today's stacked rigs.

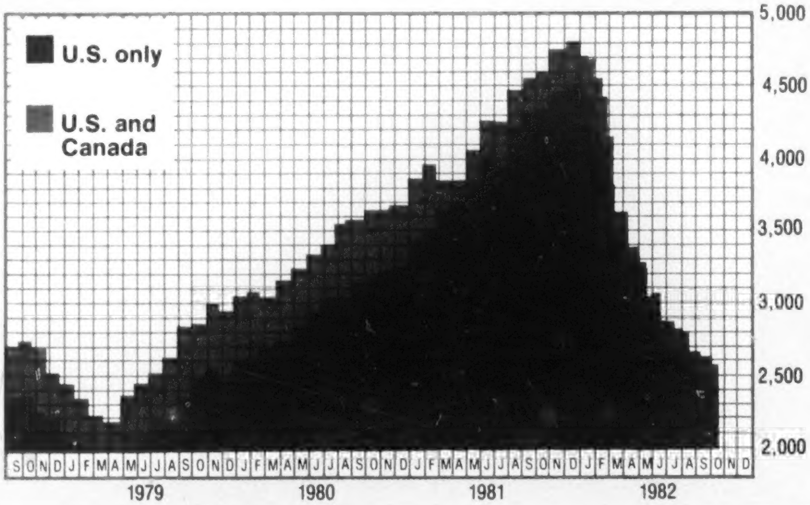
Texas, which began the year with 1,452 active rigs, has seen 647 of them idled as of mid-October. Oklahoma's count is down by 483 so far this year, and Louisiana has seen almost 200 rigs move back to the yards.

This year's average U.S. rig count, as of mid-October, is 3,254. Last year, at the same time, the average stood at 3,738. That is less than 500 rigs higher despite the large number of stacked rigs. The answer, of course, is that a substantial proportion of today's rigs did not even exist during the early months of 1981.

Rotary Rigs Actually Making Hole In United States & Canada

As Reported To International Association Of Drilling Contractors By Hughes Tool Co.

	Sept. 20, 1982	Sept. 27, 1982	Oct. 4, 1982	Oct. 11, 1982
Alabama				
Land	6	6	8	8
Inland Waters	2	2	2	3
Alaska				
Land	14	13	13	14
Offshore	2	1	2	2
Total	16	14	15	16
Arkansas	25	28	26	26
Arizona	1	0	0	0
California				
Land	90	97	92	86
Offshore	24	24	20	21
Total	114	121	112	107
Colorado	51	50	52	54
Florida				
Land	5	5	5	5
Hawaii	1	1	1	1
Illinois	76	72	74	72
Indiana	7	6	8	9
Kansas	117	120	112	123
Kentucky	7	9	8	8
North Louisiana	26	29	31	36
South Louisiana				
Inland Waters	45	47	44	44
Land	84	84	83	74
Offshore	124	131	130	139
Total Louisiana	279	291	283	293
Michigan	27	34	36	35
Mississippi	41	38	39	37
Montana	29	31	40	30
Nebraska	7	7	8	7
Nevada	5	3	7	6
New Jersey	1	0	0	0
New Mexico	67	65	80	77
New York	12	13	14	12
North Dakota	63	60	62	58
Ohio	58	62	64	46
Oklahoma	428	409	380	366
Oregon	1	1	2	2
Pennsylvania	37	35	28	35
Rhode Island				
Offshore	1	1	0	0
Tennessee	2	1	1	0
Texas				
Offshore	73	73	74	72
Texas				
Inland Waters	8	7	7	9
Dist. 1-S. Central Tx.	27	29	33	28
Dist. 2-Middle Tx. Coast	36	32	32	34
Dist. 3-Upper Tx. Coast	100	102	105	114
Dist. 4-Lower Tx. Coast	72	72	73	75
Dist. 5-N.E. Tx.	20	18	14	19
Dist. 6-Far N.E. Tx.	73	68	72	72
Dist. 7B-N. Central Tx.	47	48	43	44
Dist. 7C-W. Central Tx.	49	49	50	56
Dist. 8-Far West Tx.	98	98	96	99
Dist. 8A-West Tx.	67	66	59	65
Dist. 9-North Tx.	69	66	72	72
Dist. 10-Tx. Panhandle	44	43	41	46
Total Texas	783	771	771	805
Utah	33	31	37	35
Virginia	1	3	2	2
Washington	1	1	1	1
West Virginia	50	53	46	48
Wyoming	112	95	100	91
Total U.S.	2,466	2,439	2,429	2,418
Canada	149	153	140	137
Offshore	10	10	6	8
U.S. and Canada	2,625	2,602	2,575	2,563



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darko Basin in Beckham County, Oklahoma, was tested from perforations at 24,928-69 ft.

The well, Tipton No. 2-29, flowed after stimulation at a rate of 14.6 MMcfd of natural gas through a $^{17}/_{64}$-in. opening, with flowing tubing pressure of 4,884 psi.

International Rig Count Dips In August

The international rig count was down slightly in August, although most regions of the world stood fairly pat. Africa, for example, was a model of consistency during the month, and the Far East actually gained 10 rigs.

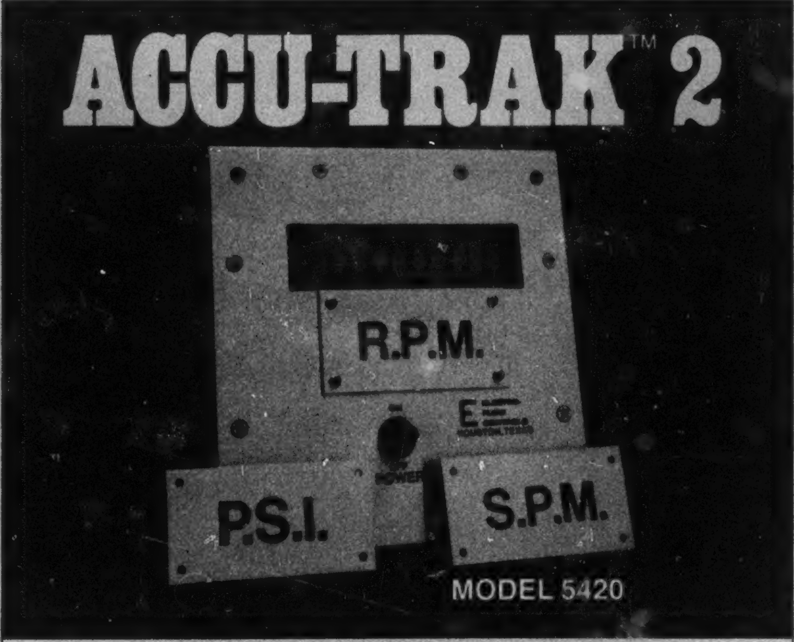
Biggest loser was Latin America, which was off 13 rigs – directly traceable to Colombia and Brazil. Europe was off eight rigs, and here, too, the cause is easy to spot – the UK offshore.

Although the August total of 1,460 active Free World rigs is 14 below the July total, it is 14 rigs ahead of the 1,446 rigs counted by Hughes Tool Co. at the end of 1981.

International Rotary Rig Report, prepared by Hughes Tool Co.

(Figures in parentheses indicate how many of each country's rigs are offshore rigs.)

	Aug. 1981	July 1982	Aug. 1982
Africa			
Algeria	80	90	90
Angola	4 (4)	13 (10)	13 (10)
Benin	0	1 (1)	1 (1)
Cameroun	8 (8)	7 (6)	7 (6)
Chad	1	1	1
Gabon	13 (8)	11 (9)	11 (9)
Guinea	0	1 (1)	1 (1)
Ivory Coast	4 (4)	4 (4)	4 (4)
Libya	33 (2)	28 (1)	28 (1)
Morocco	6 (1)	5	5
Niger	5	1	1
Nigeria	20 (5)	30 (13)	30 (13)
Congo	7 (5)	7 (6)	7 (6)
Zaire	1	2 (1)	2 (1)
Senegal	0	1	1
Sierra Leone	0	1 (1)	1 (1)
South Africa	2 (2)	2 (2)	2 (2)
Sudan	3	2	2
Tunisia	11 (3)	11 (3)	11 (3)
	198 (42)	218 (58)	218 (58)
Europe			
Austria	10	8	8
Denmark	2 (2)	2 (2)	2 (2)
France	17 (2)	19	19
Germany	28	31	31
Greece	6 (3)	4 (2)	4 (2)
Holland	19 (9)	23 (15)	23 (15)
Ireland	0	1 (1)	1 (1)
Italy	32 (7)	43 (7)	43 (7)
Norway	12 (12)	12 (12)	12 (12)
Portugal	1	1	1
Spain	9 (1)	11 (5)	11 (5)
Switzerland	1	1	1
United Kingdom	60 (55)	59 (58)	51 (50)
Yugoslavia	22	25	25
	219 (91)	240 (102)	232 (94)
Far East			
Bangladesh	5	7	7
Brunei	7 (6)	8 (6)	8 (6)
Burma	31	33	33
India	44 (7)	51 (11)	51 (11)
Indonesia	86 (27)	82 (33)	94 (33)
Japan	12 (2)	19	19 (1)
Malaysia	11 (11)	12 (12)	12 (12)
Pakistan	14	16	17
Philippines	13 (3)	15 (3)	13 (3)
Taiwan	12 (1)	6	5
Thailand	8 (5)	8 (5)	8 (5)
	243 (62)	257 (70)	267 (71)
Latin America			
Argentina	73 (4)	63 (1)	66
Barbados	1	1	1
Bolivia	12	12	12
Brazil	86 (30)	95 (30)	90 (28)
Chile	8 (4)	7 (3)	7 (3)
Colombia	20	26	17
Ecuador	4	5 (1)	5 (1)
Guatemala	7	3	3
Mexico	220 (20)	194 (23)	194 (23)
Peru	27 (6)	24 (6)	22 (6)
Trinidad	15 (8)	14 (6)	14 (5)
Venezuela	65 (18)	72 (18)	72 (19)
	538 (90)	516 (88)	503 (85)
Middle East			
Abu Dhabi	34 (16)	42 (24)	42 (24)
Bahrain	1	1	1
Dubai	2 (2)	3 (2)	3 (3)
Egypt	27 (16)	39 (25)	39 (25)



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	Aug. 1981	July 1982	Aug. 1982
Iraq	5	5	5
Kuwait	3	5	5
Oman	10	14 (2)	12 (2)
Qatar	7 (4)	6 (3)	5 (2)
Ras Al Khaimah	1	2 (1)	2 (1)
Saudi Arabia	31 (15)	26 (10)	27 (11)
Sharjah	3 (1)	3	3
Syria	16	15	15
Turkey	26	43	43
Umm Al Qaiwain	1	1	1
	167 (54)	205 (67)	203 (68)
South Pacific			
Australia	23 (4)	36 (9)	35 (8)
Fiji	0	1	1
New Zealand	1 (1)	1	1
	24 (5)	38 (9)	37 (8)
Totals	1,389 (344)	1,474 (394)	1,460 (384)

Lear Tests Gas In Anadarko Basin

Lear Petroleum Corp.'s No. 1-10 Peck well in the Anadarko Basin of western Oklahoma tested 4.6 MMcfd on a $^{10}/_{64}$-in. choke with flowing tubing pressure of 7,300 psi.

Production is from the Atoka formation at intervals from 14,276 to 14,284 ft. The well is located in a new, unnamed field in north-central Caddo County.

Howell Strikes Oil Offshore Louisiana

Howell Petroleum Corp.'s Howell Federal No. 1 in Main Pass Block 64 offshore Louisiana tested 805 b/d of oil and 315 Mcfd of natural gas through a $^{20}/_{64}$-in. opening at a flowing tubing pressure of 600 psi. The well was perforated at 7,357-75 ft.

Salen To Drill Offshore Portugal

Salen Energy, Salenia of Sweden's Salen group, and Neste, the Finnish national oil company, plan to explore for oil and gas over about 500,000 acres of the northern part of Portugal's continental shelf from the shoreline to 600 ft depth.

The area's geological structure is thought to be related to the shelf offshore Newfoundland, where the Hibernia field was recently discovered.

Amoco Hits Oil In Gulf Gas Field

Amoco Production Co. has completed an oil discovery in an existing gas field at Eugene Island Block 273, about 184 miles south-southwest of New Orleans, in the Gulf of Mexico.

Part of a redevelopment program, the well, OCS-G 0987 B-13, was drilled below the Lower Pleistocene sand into the new oil zone. It flowed 2,760 b/d on a $^{37}/_{64}$-in. choke with flowing tubing pressure of 1,416 psi. Drilled to total vertical depth of 8,602 ft, the well was completed in the Upper Pliocene sand between 7,972 and 8,008 ft.

Ratliff Tests Two Development Wells

The Clarkland No. 2 and the Stone No. 3, development wells in Oklahoma County, Oklahoma, have been completed by Ratliff Exploration Co.

The former flowed 641 b/d of oil and 450 Mcfd of gas on a $^{20}/_{64}$-in. choke with flowing tubing pressure of 900 psi. Completion was from the Prue sand at 7,486-555 ft.

The Stone No. 3 is a dual completion. From perforations in the Red Fork sand at 7,778-816 ft, it tested 1,080 b/d of oil and 756 Mcfd of gas with a $^{20}/_{64}$-in. choke and flowing tubing pressure of 750 psi. From the Prue sand, at 7,560-629 ft, it tested 960 b/d of oil and 672 Mcfd of gas on a $^{20}/_{64}$-in. choke with flowing tubing pressure of 800 psi.

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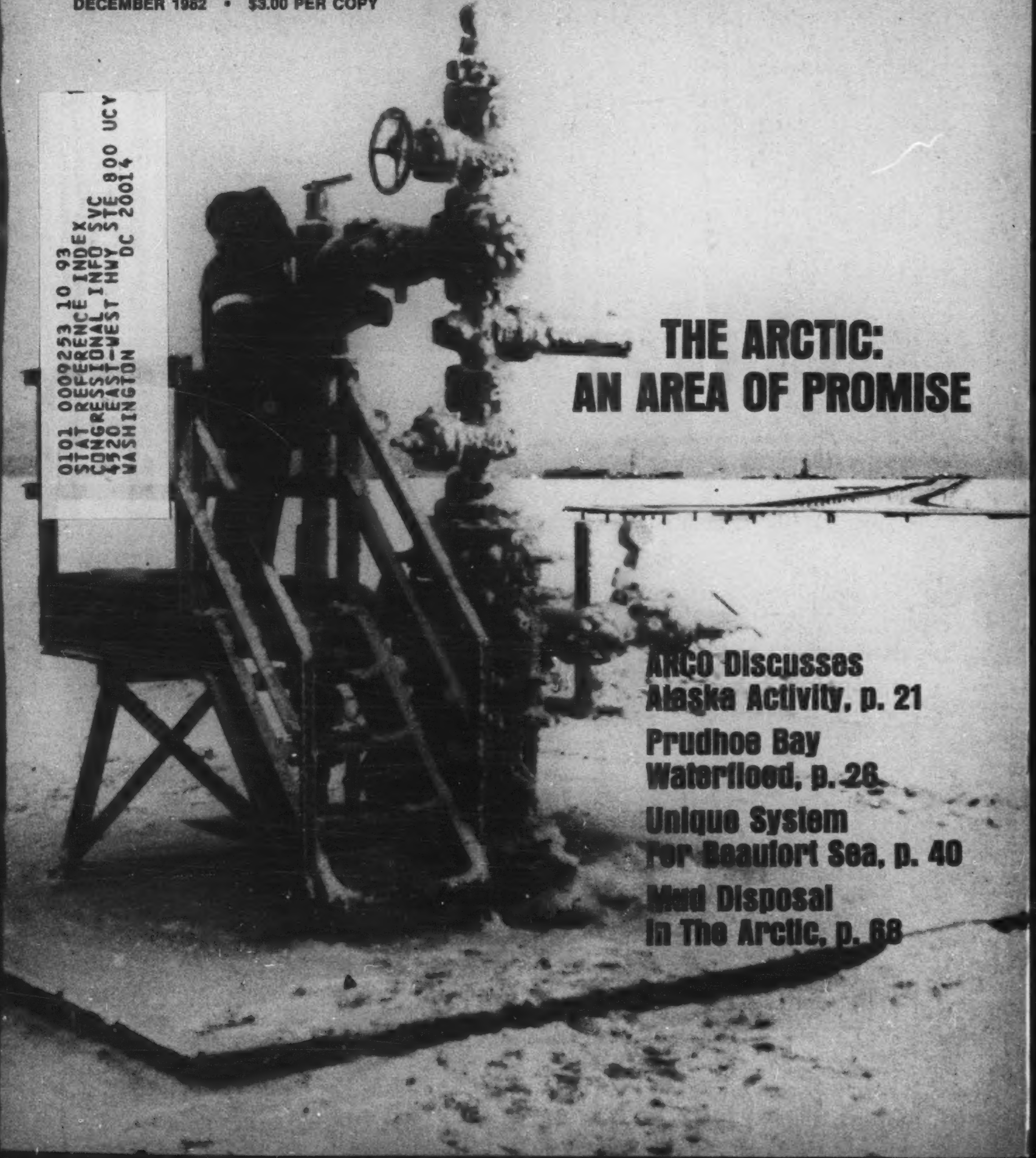

THE ARCTIC: AN AREA OF PROMISE

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ABOUT THE COVER: Although definitely an Area of Promise, the arctic is typified by harsh conditions and isolated wellheads. (Cover photo courtesy of Arco Oil and Gas Co.)

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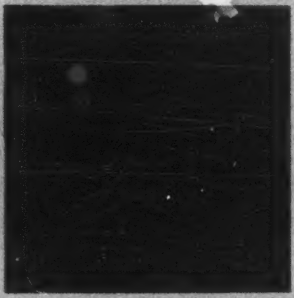

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21 Arco Management Discusses Alaska Activity

In an exclusive interview, O. Glenn Simpson and Larry N. Bell point out that there are few places in the world where really vast accumulations of oil occur. And the Alaskan North Slope has the potential to be one of them.

26 Engineers Tackle Prudhoe Bay Waterflood Project

by Walter H. F. Hoeckmann, The Ralph M. Parsons Co. Heterogeneous reservoir characteristics required system designs flexible enough to respond to conditions that could not be defined until results were analyzed.

40 Gulf Canada Moves Ahead With Unique Drilling System

by Steven D. Moore, Drilling Editor. Included are a mobile arctic caisson, conical drilling unit, two icebreakers, and two supply boats, all designed for heavy ice conditions. The aim is to extend the drilling season.

48 Shell Runs 14,500-Ft Sucker Rod Completion

by John Wilson, Gulf Coast Editor. The possibility of changing to sucker rods was first suggested during an annual well review, partly because the hydraulic pump had failed 14 times during the previous 12 months.

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NEXT MONTH: Development drilling will account for at least 75% of worldwide drilling in 1983, so that's what the January issue of PETROLEUM ENGINEER INTERNATIONAL will be all about.

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by M. P. Williams, Amoco Production Co. Commonly made mistakes in fluid routing can easily result in 50% of the rig's circulation rate being unprocessed on each circulation.

68 **Offshore Arctic Conditions Affect Drilling Mud Disposal**
by Richard C. Miller and Robert P. Britch, Northern Technical Services, and Richard V. Shafer and Sharon O. Hillman, Sohio Alaska Petroleum Co. Studies and tests examine both below-ice and above-ice discharge.

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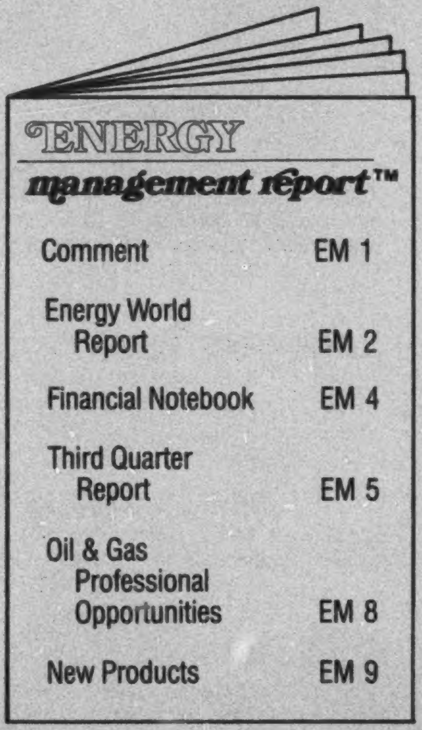

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Rig Count Rises After 2,088-Rig Loss

Three straight increases in the rig count reflected a gain of 77 active drilling rigs in the U.S. during early November. Low point for the year so far was reached on October 18, when 2,379 rigs were counted in the U.S. by Hughes Tool Co. That was a decline of 2,088 rigs from the year's high mark of 4,467, which was reached on January 4.

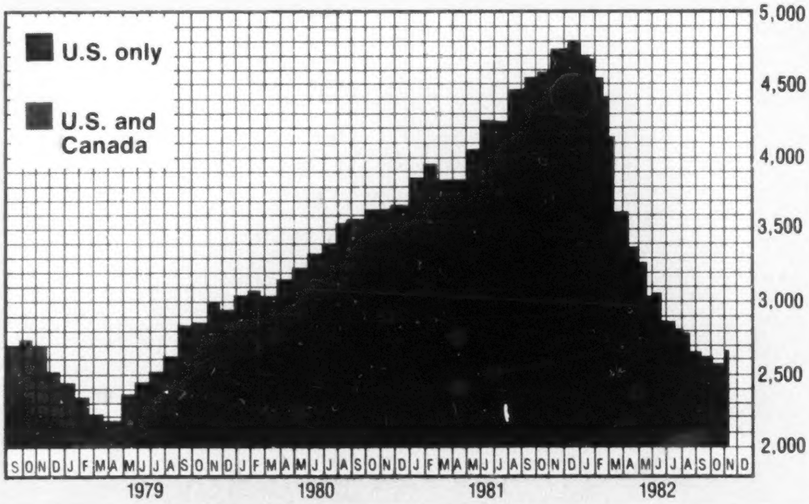
The one-rig increase credited to October 25 was only the fourth time the rig count had risen all year, and the subsequent increases on November 1 and 8 marked the first time this year that any increase lasted more than a week.

Almost 50 of the newly active rigs are located in Texas. Oklahoma, however, failed to participate in the increased activity. That state's rig count was down to 336 in early November – a decline of 499 rigs from the same week in 1981.

Rotary Rigs Actually Making Hole In United States & Canada

As Reported To International Association Of Drilling Contractors By Hughes Tool Co.

	Oct. 18, 1982	Oct. 25, 1982	Nov. 1, 1982	Nov. 8, 1982
Alabama				
Land	7	4	9	10
Inland Waters	3	3	2	2
Total	10	7	11	12
Alaska				
Land	13	12	13	12
Offshore	2	2	2	3
Total	15	14	15	15
Arkansas	24	32	32	32
California				
Land	81	89	91	90
Offshore	24	23	25	22
Total California	105	112	116	112
Colorado	48	55	59	56
Florida	5	5	4	2
Hawaii	1	1	1	1
Illinois	72	77	84	82
Indiana	9	9	9	7
Kansas	124	131	129	133
Kentucky	6	6	7	9
North Louisiana	36	36	29	32
South Louisiana				
Inland Waters	47	48	50	47
Land	63	67	73	75
Offshore	133	129	123	122
Total	279	280	275	276
Michigan	35	34	33	33
Mississippi	39	38	36	36
Montana	30	31	26	25
Nebraska	8	8	8	9
Nevada	6	6	5	3
New Mexico	75	75	78	84
New York	11	11	8	14
North Dakota	48	56	53	50
Ohio	48	47	47	51
Oklahoma	360	346	336	336
Oregon	2	1	1	1
Pennsylvania	33	31	31	29
South Dakota	0	1	1	1
Texas				
Offshore	71	72	71	72
Inland Waters	9	8	8	8
Dist. 1-S. Central Tex.	30	26	29	34
Dist. 2-Middle Tex. Coast	41	31	31	32
Dist. 3-Upper Tex. Coast	97	92	91	99
Dist. 4-Lower Tex. Coast	80	85	92	90
Dist. 5-Northeast Tex.	20	22	19	14
Dist. 6-Far Northeast Tex.	71	70	70	74
Dist. 7B-North Central Tex.	41	53	52	63
Dist. 7C-West Central Tex.	58	53	57	57
Dist. 8-Far West Tex.	107	105	108	113
Dist. 8A-West Tex.	60	61	67	65
Dist. 9-North Tex.	70	70	75	74
Dist. 10-Tex. Panhandle	43	40	47	50
Total	798	788	817	845
Utah	34	35	34	34
Virginia	3	2	3	3
Washington	1	0	0	0
West Virginia	47	38	48	50
Wyoming	103	103	106	115
Total U.S.	2,379	2,380	2,413	2,456
Canada				
Land	161	192	192	214
Offshore	7	6	6	6
U.S. and Canada	2,547	2,578	2,611	2,676



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U.S. Drilling Costs Are Down By 25%

Payments to drilling contractors in the U.S. are down about 25%, according to the Independent Petroleum Association of America's Cost Study Committee, which says that discounting on such items as mud and tubulars is ranging up to 40%.

At the same time, the committee says, rig efficiency has picked up considerably, and, in many cases, the decrease in the cost of drilling has more than offset the decline in crude oil prices.

The committee also reports that a survey it conducted of International Association of Drilling Contractors area vice presidents "revealed significant shifts from day work to footage rates, along with the reductions in prices charged for both".

Regarding tubulars, the committee says that mill shipments of tubular goods for the first 7 months of 1982 were 36.2% lower than 1981, and imports were 32.5% greater.

Table 1, prepared by the Cost Study Committee, shows how price indices for items included in drilling and equipping wells increased during the 1978 to 1981 period. Casing and tubing and casing hardware registered the biggest increases during 1981, followed by well site logging or monitoring systems, and fuel. Payments to drilling contractors came in fourth.

Table 1. Index of drilling and equipping wells

		Unadjusted for depth 1979 = 100				
	Weight,%	**1978**	**1979**	**1980**	**1981p**	**Percent increase, 1980-1981**
Payments to drilling contractors	31.0	77.2	100.0	115.2	140.3	21.8
Purchased items						
Road site preparation	5.3	90.2	100.0	112.0r	120.5	4.8
Transportation	4.1	90.4r	100.0	113.3r	124.1	9.5
Fuel	1.5	73.1	100.0	149.3r	182.1	22.3
Drilling mud and additives	7.1	90.6	100.0	117.1	132.9	13.5
Well site logging or monitoring system	1.5	85.3	100.0	119.8r	152.3	27.1
All other physical tests	0.6	87.3	100.0	112.7	117.0	3.8
Logs and wireline evaluation services	3.1	88.0	100.0	109.8	127.8	16.4
Directional drilling services	1.0	87.3	100.0	114.3	120.1	5.1
Perforate	1.6	89.4	100.0	120.4	140.8	16.9
Formation treating	4.5	92.1	100.0	120.8	141.6	17.2
Cement and cementing services	3.7	92.4	100.0	116.8	136.1	16.5
Casing and tubing	14.6	94.5	100.0	114.8	148.3	29.2
Casing hardware	0.6	94.5	100.0	114.8	148.3	29.2
Special tool rentals	3.8	90.3	100.0	108.2	121.5	12.3
Drill bits and reamers	1.8	90.9	100.0	114.1	130.6	14.5
Wellhead equipment	2.2	86.4	100.0	121.7r	138.6	20.9
Other equipment and supplies	2.4	90.3	100.0	115.9r	138.4	19.4
Plugging	0.4	92.9	100.0	110.7r	124.8	12.7
Supervision and overhead	2.2	90.8	100.0	110.9r	123.0	10.9
All other expenditures	7.0	88.6	100.0	116.2r	128.6	10.7
Subtotal purchased items	69.0	90.5r	100.0	115.9r	135.6	17.0

r = revised p = preliminary

SOURCE: Weights from IPAA Cost Study Committee Survey of distribution of expenditures in drilling and equipping wells in 1979. Index of payments to drilling contractors from IPAA Annual Survey. Price indices from Bureau of Labor Statistics and other government publications, industry publications, and data provided IPAA Cost Study Committee by service and equipment companies.

Government Accepts 121 Beaufort Bids

The Interior Department's Minerals Management Service accepted high bids totaling $2.056 billion for 121 of the 125 tracts on which bids were received in the October 13 offshore oil and gas lease sale (OCS 71) in Anchorage, Alaska. The four rejected high bids, which MMS said were inadequate, totaled $11.9 million.

The tracts to be leased cover some 663,000 acres in the Diapir field of the Beaufort Sea, northwest of the Prudhoe Bay and Kuparuk oil fields. In all, 338 tracts covering 1.8 million acres were offered in the sale, which was the second under Interior Secretary James Watt's 5-year offshore leasing program which went into effect July 21.

Highest individual bid at the Sale 71 was $227 million, by a Sohio, Mobil, and BP Alaska group, for Tract 191 in the Harrison Bay area. The 5,700-acre block is in 50 ft of water and is 17 miles from shore. Most of the sale's top bidgetters are located in the Harrison Bay area, which is northwest of Milne Point, about 75 miles from Prudhoe Bay. Exxon, however, spent $73 million for Tract 58, offshore Pitt Point, and it turned out to be the eighth most popular tract. Pitt Point is north of the Naval Petroleum Reserve-Alaska, and Tract 58 is 7 miles from shore, in 30 ft of water.

Expensive Tract Is Discovery Site

The recent Chevron-Phillips oil discovery 15 miles west of Point Conception, Calif., was made on the most expensive offshore tract ever leased in the U.S.

The discovery is on Parcel 450, acquired by Chevron U.S.A. Inc., the operator, and Phillips Petroleum Co., an equal partner, for a bonus of $333.6 million in OCS Lease Sale 53, held in May 1981.

Chevron and Phillips already are drilling their first followup well, the P-0450 No. 2, approximately 2 miles to the south. P-0450 No. 3 is to be drilled a mile to the west. In addition, Chevron, Phillips, and Champlin Petroleum Co. are drilling a wildcat, P-0451 No. 1, 3 miles to the east.

Stripper Production Increases by 6%

Stripper wells in the U.S. during 1981 produced 426,502,365 bbl of oil, a 6.3% increase over the 401,095,000 bbl produced by stripper wells in 1980.

The National Stripper Well Survey, published by the Interstate Oil Compact Commission and the National Stripper Well Association, says there were 409,539 stripper wells in operation as of Jan. 1, 1982. By comparison, there were 395,176 stripper wells a year earlier. This means there was a 1-year increase of 14,363 wells and 25,407,368 bbl of production.

Although stripper well abandon-

Foreign Operations Curb Profits

by Cindy Mays, *Assistant Editor, Energy Management Report*

Despite a strong showing by U.S. refining and marketing operations, the 73 oil companies responding to our survey report a 19.1 percent drop in earnings for the third quarter. Profit margin for the group fell from 6.7 percent to 5.4 percent.

Once again, those companies with a major stake in U.S. petroleum operations posted substantial increases in net income this quarter as illustrated in the 84 percent rise at Amerada Hess.

Ashland Oil's 54 percent jump was due primarily to lower priced domestic sources for crude oil, accounting for 70 percent of their refining needs, compared to 58 percent last year.

Earnings at Atlantic Richfield rose 3 percent as a result of sharply increased earnings in petroleum refining and marketing, oil production from Alaska's Kuparuk River field, and higher natural gas prices.

The combination of improved margins in Union Oil of California's refining and marketing activities and decreased dry hole and exploration expenses sent their earnings up 10.3 percent.

Aramco members, on the other hand, were hurt by their agreement to buy $34/bbl Saudi oil.

Exxon's third quarter earnings dropped 25 percent; Mobil, 36 percent; Texaco, 49 percent; and Standard Oil of California, 13 percent.

Among the major oil companies surveyed, Gulf Oil reported the biggest decline at 54 percent. The largest contributing factor was a pretax write-down of more than $100 million on chemical properties.

Standard Oil of Ohio posted a 4 percent gain in net income. Results from the company's exploration and production, and marketing and refining operations offset losses in coal, chemicals, and industrial products.

Lower crude oil prices and slumping natural gas demand overshadowed higher U.S. gas prices, resulting in a 28 percent drop in earnings at Sun Co. and a 6.1 percent decline at Shell Oil.

Pennzoil earnings were adversely affected by sharply reduced pipeline purchases of natural gas, dropping 17 percent.

Cities Service 67.8 percent decline was due mostly to an after-tax increase of $36 million in exploration costs and interest expense.

Continued pressure on refined product margins, lower crude oil and free market natural gas prices, and a soft coal market caused Dorchester Gas earnings to drop 43.1 percent.

American Petrofina's net income fell 41.4 percent because higher charges attributable to the company's expanded exploration program caused operating income from exploration and production activities to decline.

Lower demand for natural gas and related services contributed to the 8.5 percent decline in third quarter earnings for the 27 gas companies in our survey group. Profit

GAS COMPANIES THIRD QUARTER FINANCIAL REPORTS

	Three months ending September 30						Nine months ending September 30						Profit Margin	
	Revenues ($000)			Earnings ($000)			Revenues ($000)			Earnings ($000)				
Company	1982	1981	% Chg.	1982	1981	% Chg.	1982	1981	% Chg.	1982	1981	% Chg.	1982	1981
Alabama Tennessee NG	29,582	25,413	+ 16.4	1,329	1,184	+ 12.3	96,596	86,542	+ 11.6	4,316	4,135	+ 4.4	4.5	4.8
Am. Nat. Resources	528,328	529,022	- 0.1	17,756	(109)		2,275,009	2,008,168	+ 13.3	113,337	70,485	+ 60.8	5.0	3.5
ARKLA	274,586	254,726	+ 7.8	12,435	12,118	+ 2.6	1,262,669	1,137,030	+ 11.0	93,600	85,463	+ 9.5	7.4	7.5
Coastal Corp.	1,324,087	1,408,797	- 6.0	21,224	1,827	+ 1061.5	4,236,378	4,594,905	- 7.8	43,048	(22,328)		1.0	
Columbia Gas	793,086	713,683	+ 11.1	(24,725)	(148)		3,662,901	3,075,173	+ 19.1	110,494	118,912	- 7.1	3.0	3.9
Consolidated NG	498,136	360,007	+ 38.4	6,237	931	+ 569.9	2,327,315	1,927,567	+ 20.7	118,109	94,320	+ 8.2	5.1	4.9
El Paso Cos.	954,794	962,239	- 0.8	26,773	39,172	- 31.6	2,845,181	2,781,403	+ 2.3	66,162	107,848	- 38.6	2.3	3.9
ENSERCH	968,317	853,113	+ 13.5	31,300	41,613	- 24.8	2,874,242	2,509,521	+ 14.5	124,553	143,733	- 13.3	4.3	5.7
Equitable Gas	62,936	52,113	+ 20.8	2,034	1,718	+ 18.4	418,480	407,164	+ 2.8	37,100	39,904	- 7.0	8.9	9.8
Houston NG[1]	728,328	800,617	- 9.0	56,630	63,149	- 5.6	3,180,718	2,906,310	+ 9.4	262,290	238,248	+ 10.1	8.2	8.2
InterNorth	806,249	741,606	8.7	13,978	27,768	- 49.7	2,980,459	2,622,201	+ 13.6	142,074	183,435	- 22.5	4.8	7.0
Kansas-Nebraska NG	109,961	109,522	+ 0.4	4,064	6,971	- 41.7	355,129	319,162	+ 11.3	17,936	18,663	- 3.9	5.1	5.9
Northwest Energy	218,311	220,177	- 0.8	(4,163)	11,975		1,002,318	924,412	+ 8.4	31,108	50,099	- 37.9	3.1	5.4
ONEOK Inc.	206,758	240,380	- 14.0	7,779	10,599	- 26.6	833,198	835,307	- 0.3	41,554	46,440	- 10.5	5.0	5.6
Pacific Lighting[2]	1,027,115	801,550	+ 28.1	22,490	27,059	- 16.9	3,208,272	2,395.361	+ 33.9	83,738	98,328	- 14.8	2.6	4.1
Panhandle Eastern	758,898	741,846	+ 2.3	48,544	56,181	- 13.6	2,511,390	2,463,025	+ 1.9	184,508	212,940	- 13.4	7.3	8.6
Peoples Energy	1,542,490	1,315,617	+ 17.2	45,952	48,210	- 4.7	151,172	161,500	- 6.4	(12,293)	(8,512)			
Pioneer Corp.	308,938	310,952	- 0.6	26,077	27,399	- 4.8	866,157	907,129	- 4.5	72,556	84,998	- 14.6	8.4	9.4
Sonat Inc.	563,054	598,891	- 6.4	48,304	38,209	+ 26.4	1,990,098	1,900,956	+ 4.7	160,640	129,029	+ 24.5	8.1	6.8
Southern Union	223,408	220,122	+ 1.5	(1,471)	69		817,318	777,587	+ 5.1	12,872	27,901	- 53.9	1.6	3.6
Texas Eastern	1,315,003	1,110,982	+ 18.4	43,275	45,521	- 4.9	4,151,625	3,283,496	+ 26.4	147,952	164,434	- 10.0	3.6	5.0
Texas Gas Trans.	650,800	610,900	+ 6.5	25,556	32,862	- 21.9	2,107,385	1,884,414	+ 11.8	83,869	102,703	- 18.3	4.0	5.5
TransCanada PipeLines	752,045	721,371	+ 4.3	49,633	38,758	+ 28.1	2,567,188	2,479,442	+ 3.5	138,931	103,072	+ 34.8	5.4	4.2
Transco	927,654	807,898	+ 14.8	30,447	28.587	+ 6.5	2,808,429	2,578,466	+ 8.9	108,302	91,057	+ 18.9	3.9	3.5
United Energy Res.	1,290,193	1,389,606	- 7.2	40,634	49,632	- 18.1	4,245,722	3,925,656	+ 8.2	159,080	158,944	+ 0.1	3.7	4.0
Westcoast Trans.	151,461	200,138	- 41.8	20,702	14,998	+ 38.0	791,326	906,426	- 12.7	58,449	48,661	+ 20.1	7.4	5.4
TOTALS	17,014,518	16,161,288	+ 5.3	572,864	626,253	- 8.5	54,563,675	49,798,432	+ 9.6	2,403,557	2,392.912	+ 0.4	4.4	4.8

[1] Three months and twelve months ended July 31. [2] Twelve months.

OIL COMPANIES THIRD QUARTER FINANCIAL REPORTS

	Three months ending September 30**						Nine months ending September 30**						Profit‡ Margin	
	Revenues ($000)			Earnings* ($000)			Revenues ($000)			Earnings* ($000)				
Company	1982	1981	% Chg.	1982	1981	% Chg.	1982	1981	% Chg.	1982	1981	% Chg.	1982	1981
Adobe O&G Corp.	51,202	48,213	+ 6.2	5,761	6,060	- 4.9	154,944	133,317	+ 16.2	17,490	18,000	- 2.8	11.3	13.5
Amerada Hess	2,124,094	1,903,170	+ 11.6	80,127	43,523	+ 84.1	6,277,571	7,104,206	- 11.6	125,049	164,343	- 23.9	2.0	2.3
American Petrofina	540,121	610,747	- 11.6	12,696	21,650	- 41.4	1,723,328	1,990,945	- 13.4	39,566	57,151	- 30.8	2.3	2.9
Argo Petroleum	5,975	4,956	+ 20.6	(2,128)	555		17,004	16,110	+ 5.6	(3,538)	2,073			12.9
Ashland Oil	8,864,669	9,262,076	- 4.3	30,057	26,502	+ 13.4	2,212,229	2,526,114	- 91.2	75,819	49,279	+ 53.9	3.4	2.0
Asamera	114,662	119,527	- 4.1	977	2,542	- 61.6	321,892	338,347	- 4.9	(867)	6,692			2.0
Atlantic Richfield	6,795,462	7,076,365	- 3.9	446,884	433,532	+ 3.0	20,245,850	21,397,558	- 5.4	1,242,071	1,201,472	+ 3.4	6.1	5.6
Beard Oil	8,065	9,013	- 10.5	(885)	1,356		26,898	25,280	+ 6.4	(250)	3,851			15.2
Belco Petroleum	84,352	77,454	+ 8.9	25,230	24,088	+ 4.7	246,037	234,765	+ 4.8	76,265	71,984	+ 5.9	31.0	30.7
Callon Petroleum[1]	5,371,390	3,136,060	+ 71.3	57,471	376,912	- 84.7	16,708,000	9,291,305	+ 79.8	2,075,078	2,610,406	- 20.5	12.4	28.1
Cities Service	1,962,400	1,910,900	+ 2.7	25,000	77,600	- 67.8	5,853,100	5,781,400	+ 1.2	152,700	225,800	32.4	2.6	3.9
Commonwealth Oil Refining	21,900	258,200	- 91.5	(5,900)	(20,600)		288,100	809,400	64.4	(22,100)	(83,000)			
Consolidated O&G	9,092	12,214	- 25.6	(1,469)	2,015		30,648	36,564	- 16.2	(3,781)	5,708			15.6
Crown Central	464,815	316,196	+ 47.0	8,365	(5,189)		1,304,449	1,074,809	+ 21.4	2,418	(11,503)		0.2	
Crystal Oil	46,798	82,674	- 43.4	1,670	1,219	+ 37.0	152,924	227,826	- 32.9	(232)	274			0.1
Diamond Shamrock	733,196	820,569	- 10.6	42,272	54,401	- 22.3	2,422,040	2,503,667	- 3.3	103,347	170,423	- 39.4	4.3	6.8
Dorchester Gas	1,159,101	712,033	+ 62.8	17,812	31,287	- 43.1	353,571	230,842	+ 53.2	4,034	7,704	47.6	1.1	3.3
Dyco Petroleum	15,152	12,647	+ 19.8	4,104	3,819	+ 7.5	43,699	35,423	+ 23.4	11,935	10,368	+ 15.1	27.3	29.3
Engle Exploration[2]	965	212	+355.2	(236)	(50)		1,444	415	+248.0	(761)	(120)			
Energy Reserves Group	39,743	43,176	- 7.9	(4,859)	(4,637)		121,928	129,741	- 6.0	(16,509)	(146)			
Enstar Corp.	82,810	88,375	- 6.3	11,461	8,525	+ 34.4	262,317	259,983	+ 0.9	30,928	32,755	- 5.5	11.8	12.6
Equity Oil	5,583	6,318	- 11.6	198	1,393	- 85.8	17,340	18,759	- 7.6	1,904	4,250	- 55.5	11.0	22.8
Exxon	25,331,000	27,614,000	- 8.6	1,070,000	1,075,000	- 0.5	77,394,000	85,406,000	- 9.4	3,195,000	4,500,000	- 29.0	4.1	5.3
Felmont Oil Corp.	18,795	20,046	- 6.2	3,898	3,762	+ 3.6	58,022	56,271	+ 3.1	11,031	12,395	- 11.0	19.0	22.0
Forest Oil Corp.	40,194	37,818	+ 6.3	4,660	369	+1162.9	116,055	103,812	+ 11.8	9,900	3,597	+175.2	8.5	3.5
Freeport McMoRan	186,137	202,834	- 8.2	19,748	36,782	- 46.3	556,057	635,650	- 12.5	61,681	128,405	- 52.0	11.1	20.2
Galaxy Oil	3,829	3,552	+ 7.8	(542)	64		10,704	11,133	- 3.8	(1,954)	371			3.3
General American	85,948	94,579	- 9.1	16,299	20,911	- 22.1	256,036	268,753	- 4.7	47,819	45,564	+ 4.9	18.7	17.0
Getty Oil	3,083,766	3,267,550	- 5.6	177,854	204,931	- 13.2	9,286,618	9,778,720	- 5.0	492,763	639,636	- 23.0	5.3	6.5
Gulf Energy & Dev.	29,218	14,299	+104.3	2,306	1,777	+ 29.8	63,393	42,480	+ 49.2	3,794	5,067	- 25.1	6.0	11.9
Gulf Oil Corp.	7,538,000	7,439,000	+ 1.3	146,000	316,000	- 53.8	22,502,000	22,526,000	- 0.1	623,000	930,000	- 33.0	2.8	4.1
Hamilton Bros. Petroleum	37,197	42,797	- 13.1	4,520	3,070	+ 47.2	126,147	105,937	+ 19.1	8,863	12,444	- 28.8	7.0	11.7
Harken O&G	1,481	1,161	+ 27.6	98	33	+197.0	4,109	2,950	+ 39.3	(677)	(952)			
Holly Corp.[3]	153,895	99,515	+ 54.6	(2,150)	(1,495)		435,373	289,644	+ 50.3	5,071	274	+1750.7	1.2	0.1
Howell Corp.	53,303	55,591	- 4.1	356	(902)		184,065	167,168	+ 10.1	1,909	(1,097)		1.0	
Howell Petroleum	13,234	21,366	- 38.1	1,493	1,802	- 17.1	56,931	66,195	- 14.0	6,007	5,370	+ 11.9	10.6	8.1
Inexco Oil	51,535	61,525	- 16.2	2,770	7,533	- 63.2	170,061	176,117	- 3.4	14,795	22,325	- 33.7	8.7	12.7
Lear Petroleum	54,362	45,427	+ 19.7	1,520	(840)		157,289	123,390	+ 27.5	253	2,601	- 90.3	0.2	2.1
Louisiana L&E	259,144	313,805	- 17.4	19,245	34,479	- 44.2	873,873	934,748	- 6.5	53,079	126,696	- 58.1	6.1	13.6
Mapco Inc.	489,569	512,398	- 4.5	20,236	11,332	+ 78.6	1,452,246	1,597,792	- 9.1	54,127	66,776	- 18.9	3.7	4.2
Maynard Oil	6,761	12,419	- 45.6	(340)	1,746		26,243	33,324	- 21.2	(989)	5,675			17.0
Mesa Petroleum	99,709	103,810	- 4.0	29,414	23,955	+ 22.8	303,667	308,346	- 1.5	91,233	78,259	+ 16.6	30.0	25.4
Mobil Corp.	15,534	16,788	- 7.5	323,000	506,000	- 36.2	47,727	50,492	- 5.5	959,000	1,846,000	- 48.0	20.1	36.6
Moran Energy	20,864	25,412	- 17.9	480	4,812	- 90.0	74,253	74,371	- 0.2	6,388	14,727	- 56.6	8.6	19.8
Murphy Oil	641,018	531,867	+ 20.5	43,869	41,123	+ 6.7	1,983,925	1,858,694	+ 6.7	118,952	124,548	- 4.5	6.0	6.7
Natomas	419,165	403,950	+ 3.8	(43,817)	67,926		1,214,464	1,139,656	+ 6.6	(52,367)	183,720			16.1
Noble Affiliates	94,889	101,847	- 6.8	17,718	21,918	- 19.2	317,261	282,752	+ 12.2	60,403	58,309	+ 3.6	19.0	20.6
Norris Oil	696	726	- 4.1	104	(120)		2,033	2,056	- 1.1	158	(97)		7.8	
Pacific Resources	276,434	302,189	- 8.5	4,441	6,085	- 27.0	841,949	766,918	+ 9.8	2,925	7,498	- 61.0	0.3	1.0
Pennzoil Co.	563,502	668,666	- 15.7	52,488	46,445	+ 13.0	1,739,367	2,028,769	- 14.3	135,210	163,549	- 17.3	7.8	8.1
Petrol Industries Inc.	662	762	- 13.1	141	213	- 33.8	1,800	2,400	- 25.0	373	720	- 48.2	20.7	30.0
Prairie Producing Co.	6,500	8,268	- 21.4	1,227	2,050	- 40.1	20,031	22,636	- 11.5	3,402	6,028	- 43.6	17.0	26.6
Phillips Petroleum	4,002,333	3,895,148	+ 2.8	131,640	192,287	- 31.5	11,845,172	12,196,572	- 2.9	460,375	692,838	- 33.6	3.9	5.7
Quaker State	245,542	251,660	- 2.4	11,517	9,613	+ 19.8	718,789	689,736	+ 4.2	31,352	20,616	+ 52.1	4.4	3.0
Sabine Corp.	51,178	40,486	+ 26.4	5,423	6,679	- 18.8	147,716	125,921	+ 17.3	21,433	22,714	- 5.6	14.5	18.0
Shell Oil	5,090,000	5,578,000	- 8.7	442,000	471,000	- 6.1	15,037,000	16,545,000	- 9.1	1,166,000	1,242,000	- 6.1	7.7	7.5
Southland Royalty	86,803	100,758	- 13.9	7,079	6,911	+ 2.4	274,551	301,085	- 8.8	23,868	27,321	- 12.6	8.7	9.1
Southwestern Energy	12,182	9,408	+ 29.5	1,608	1,717	- 6.3	46,052	41,441	+ 11.1	8,439	9,569	- 11.8	18.3	23.1
Standard California	8,666,000	11,458,000	- 24.4	459,000	527,000	- 12.9	28,056,000	34,425,000	- 18.5	952,000	1,809,000	- 47.4	3.4	5.2
Standard Indiana	7,676,000	7,957,000	- 3.5	559,000	608,000	- 8.1	22,399,000	23,349,000	- 6.5	1,411,000	1,538,000	- 8.3	6.3	6.4
Standard Ohio	3,175,000	3,704,400	- 14.3	487,300	470,000	+ 3.7	9,387,400	10,106,500	- 7.1	1,415,200	1,469,100	- 3.7	15.1	14.5
Sun Co.	3,800,000	3,700,000	+ 2.7	152,000	210,000	- 27.6	11,800,000	11,600,000	+ 1.7	386,000	628,000	- 38.5	3.3	5.4
Sundance Oil	21,780	9,199	+136.8	(9,795)	(3,752)		72,894	22,523	+223.6	(8,095)	(7,040)			
Superior Oil	499,823	499,785		37,411	80,811	- 53.7	1,536,394	1,496,872	+ 2.6	193,119	288,066	- 33.0	12.6	19.2
Tenneco	3,780,976	3,621,310	+ 4.4	182,304	140,990	+ 29.3	11,559,295	11,293,076	+ 2.4	484,179	506,616	- 4.4	4.2	4.5
Texaco Inc.	11,800,000	14,400,000	- 18.3	303,000	589,000	- 48.7	363,300,000	44,700,000	- 18.9	975,000	1,803,000	- 46.0	2.7	4.0
Tosco Corp.	901,970	900,655	+ 0.1	22,138	19,100	+ 15.9	2,552,219	2,529,999	+ 0.8	129,355	7,516	+ 16.2	5.1	0.3
Total Petroleum N.A.	553,224	583,401	- 5.2	8,267	(9,531)		1,649,284	1,725,600	- 4.4	7,504	(48,941)		0.5	
Transcontinental Engy	11,778	25,176	- 53.2	(2,278)	2,826		46,916	71,597	- 34.5	(5,010)	7,863			11.0
Union California	2,771,700	2,908,300	4.7	212,800	193,000	+ 10.3	8,163,000	8,384,800	- 2.6	578,900	555,400	+ 4.2	7.1	6.6
Universal Resources	13,926	16,837	- 17.3	1,494	3,601	- 58.5	45,518	46,425	- 0.2	6,724	9,922	- 32.2	14.8	21.4
Wiser Oil	13,073	14,339	- 8.8	2,248	2,900	- 22.5	40,913	47,506	- 13.9	9,391	11,890	- 21.0	23.0	25.0
Woods Petroleum	19,792	16,638	+ 19.0	4,864	4,523	+ 7.5	60,960	49,069	+ 24.2	16,535	13,264	+ 24.7	27.1	27.0
TOTAL	121,307,168	128,196,562	- 5.4	5,290,664	6,541,772	- 19.1	340,827,185	363,359,672	- 6.2	18,319,244	24,448,108	- 25.1	5.4	6.7

*Earnings available to common. **Excluding non-recurring items. ‡Profit Margin=Earnings ÷ Revenues. [1] Three months ending Aug. 31 with year ending May 31. [2] Fiscal year ends Sept. 30. [3] Ends April 30.

margin fell from 4.8 percent to 4.4 percent.

The depressed economy was blamed for United Energy Resources' 18.1 percent decline.

The El Paso Company reported a 31.6 percent drop in net income due to the reduction in gas market demand, reduced margins and volumes on sales of chemical products, and higher interest expense.

Columbia Gas System posted a net loss this quarter due to depressed natural gas sales, and reduced System natural gas and oil production.

Reduced customer demand for gas, increases in uncollectible accounts, and inflation were among the factors causing Peoples Energy net earnings to fall 4.7 percent.

InterNorth's net income declined 49.7 percent because of recession-depressed wholesale natural gas and petrochemical results.

Kansas-Nebraska Natural Gas earnings were adversely affected by reduced gas sales to irrigation and industrial customers and a decline in activity by their pipeline construction unit.

Consolidated Natural Gas attributes their 569 percent gain in third quarter earnings to the increase in gas sales made to non-affiliated pipelines and utilities.

Coastal Corp. reported net income of $21.2 million this quarter compared to $1.8 million last year. The increase reflects improvement in refining and marketing during the third quarter. ■

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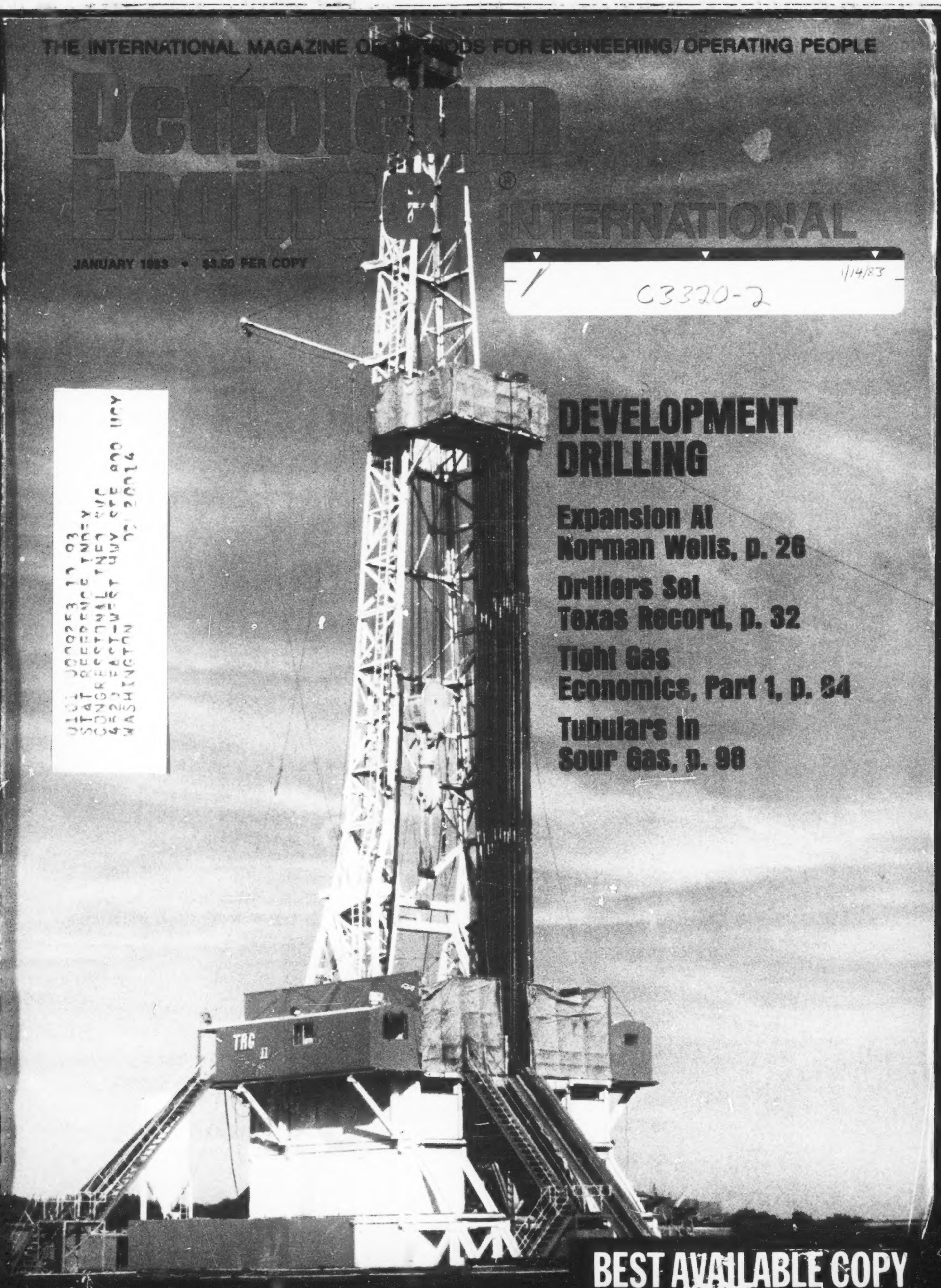

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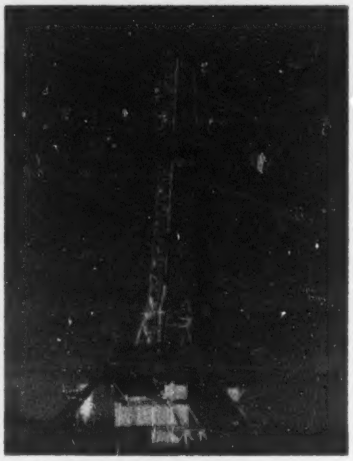

ABOUT THE COVER: Photo taken in Caddo County, Oklahoma, shows a Grace Petroleum Co. development well being drilled by Grace Drilling Co.'s Rig 11. For a report on development drilling, see page 21.

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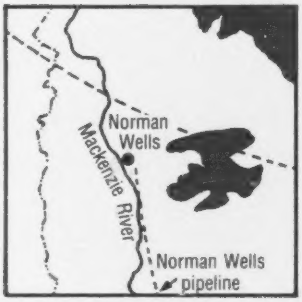

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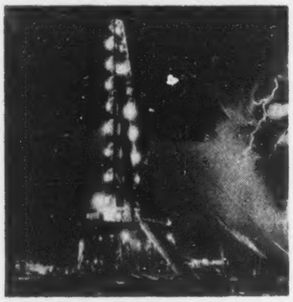

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NEXT MONTH: The annual World Offshore Forecast takes a look at some of the innovative technology being applied to frontier areas around the world.

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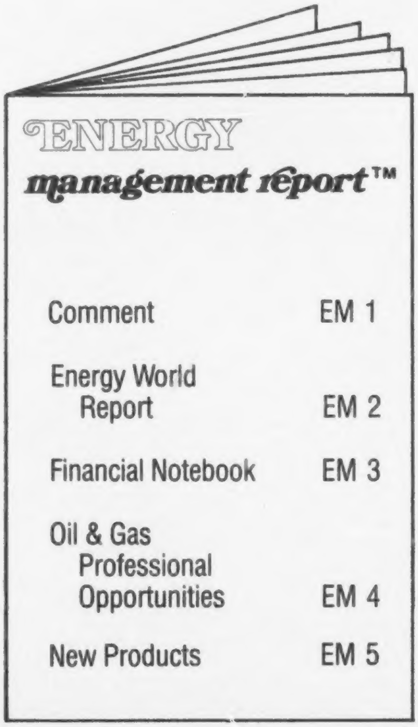

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Late Surge Boosts Rig Activity By 10%

By adding an average of 36 rigs per week to the U.S. rotary rig count between mid-October and early December, U.S. drillers increased the number of rigs at work in the country by more than 250. That is a 10% increase, but Canadian drillers did even better. They increased their country's rig count by 151 rigs during the same period, and that represents an increase of 89.9%.

Most observers look on the late season surge as a return to traditional U.S. drilling patterns that generally have seen yearly highs reached in late December. Frank Potter, director of public affairs for Hughes Tool Co., told us that he recently did a little ciphering which shows that yearly highs have occurred during the last 2 weeks of the year 73% of the time since 1949.

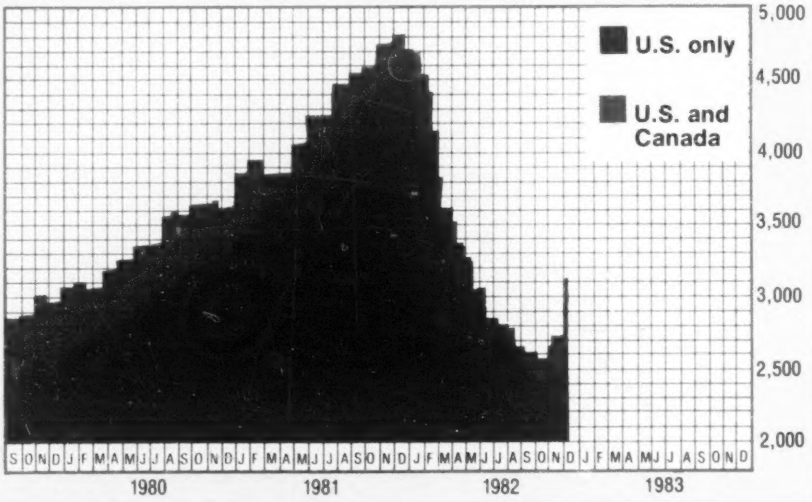
Lows, he said, occurred within the first 9 weeks of the year 57.7% of the time, and within the second 9 weeks 30% of the time. In 87% of the years from 1949 to 1979, therefore, lows have occurred during the first 5 months.

Rotary Rigs Actually Making Hole In United States & Canada

As Reported To International Association Of Drilling Contractors By Hughes Tool Co.

	Nov. 15, 1982	Nov. 22, 1982	Nov. 29, 1982	Dec. 6, 1982
Alabama				
Land	9	9	9	9
Inland Waters	2	2	2	2
Alaska				
Land	14	13	13	12
Offshore	3	3	3	3
Total Alaska	17	16	16	15
Arkansas	29	29	27	26
California				
Land	94	103	103	106
Offshore	23	22	19	20
Total California	117	125	122	126
Colorado	54	54	52	55
Florida	2	3	3	3
Hawaii	1	1	1	1
Illinois	82	78	77	80
Indiana	7	8	8	8
Kansas	140	140	143	143
Kentucky	10	8	6	6
North Louisiana	30	38	37	38
South Louisiana				
Inland Waters	51	50	46	53
Land	79	88	90	87
Offshore	114	117	117	119
Total Louisiana	274	293	290	297
Michigan	26	31	32	32
Mississippi	34	36	36	42
Montana	22	23	27	28
Nebraska	11	12	14	9
Nevada	3	3	3	2
New Mexico	81	87	89	91
New York	13	15	15	12

	Nov. 15, 1982	Nov. 22, 1982	Nov. 29, 1982	Nov. 6, 1982
North Dakota	44	48	47	49
Ohio	51	55	59	57
Oklahoma	340	351	367	362
Oregon	1	1	1	1
Pennsylvania	34	32	34	33
South Dakota	4	4	3	3
Tennessee	0	1	1	1
Texas				
Offshore	72	70	69	72
Inland Waters	8	9	8	9
Dist. 1-S. Central Tex.	33	38	35	43
Dist. 2-Middle Tex. Coast	29	34	29	23
Dist. 3-Upper Tex. Coast	98	95	97	96
Dist. 4-Lower Tex. Coast	94	97	100	100
Dist. 5-Northeast Tex.	12	15	16	18
Dist. 6-Far Northeast Tex.	76	84	84	86
Dist. 7B-North Central Tex.	62	54	65	68
Dist. 7C-West Central Tex.	61	72	75	77
Dist. 8-Far West Tex.	121	116	123	131
Dist. 8A-West Tex.	62	68	76	79
Dist. 9-North Tex	80	74	71	69
Dist. 10-Tex. Panhandle	50	51	57	50
Total Texas	858	877	905	921
Utah	35	34	32	37
Virginia	3	3	3	2
West Virginia	54	52	55	53
Wyoming	119	119	124	127
Total U.S.	2,477	2,550	2,603	2,633
Canada				
Land	242	283	305	316
Offshore	6	6	6	3
U.S. and Canada	2,725	2,839	2,914	2,952



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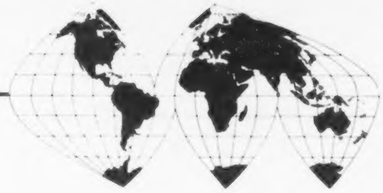

The basic vulnerability of the world economy to oil supply disruptions is far from being eliminated, according to the International Energy Agency's second World Energy Outlook.

Published by the IEA Secretariat late last year in Paris, the study projects energy and oil demand to 1990 and 2000 under a number of scenarios which show that today's surplus in the oil market conceals the underlying medium and long-term demand trends.

Energy markets and the oil market in particular, the study says, are likely to remain deceptively stable through the mid 1980s, but the results of the projections all point to a tightening in the oil market later in the decade.

Using a number of assumptions, scenarios in the IEA report foresee slackening overall energy demand together with relatively high levels of domestic oil production contributing to a decline in oil import demand by member countries of the Organization for Economic Cooperation and Development (OECD) over the next few years. Therefore, increased oil demand expected from OPEC and other developing countries is likely to be absorbed by the oil market without major strains in the short term.

World Energy Outlook projections show, however, that, after the mid-1980s, the oil market is likely to move into disequilibrium as growing world oil demand, especially in OPEC and other developing countries, runs up against falling production in North America, the North Sea, and the Soviet Union, plus reduced exports from some OPEC countries.

If these developments occur together with limited progress in substituting other fuels for oil, then the stage could be set for renewed erratic oil price movements. WEO also reiterates that unpredictable events in the Middle East remain a major risk that could precipitate another oil price shock – particularly in a finely balanced oil market.

Misleading Signals

In the shorter term, the report indicates that energy and oil prices may decrease significantly in real terms during 1983. There is a danger, however, that falling oil prices will send misleading signals to those involved in the energy market, resulting in complacency among consumers and hesitation among investors. As a result, necessary actions to overcome difficulties foreseen for the later 1980s and the 1990s may not be taken in time.

To avoid this, the study underlines the necessity for a concerted effort by governments and the private sector to continue the movement toward a more balanced structure of energy supply and demand in which the share of imported oil is reduced and other fuels are made available to replace it.

The report cautions that the demand-restraining effects of recent oil price increases will be gradually absorbed over time and, therefore, if market signals are not reinforced by strengthened energy policy actions now, energy demand will resume momentum, reversing progress already achieved.

The key issue continues to be whether continuing improvements in energy efficiency, along with substitution of other fuels for oil, will be brought about by the energy policy process. If not, they are likely to be forced upon industrial countries by recurrent sharp oil price increases resulting in constrained economic growth.

The IEA Secretariat report concludes that basic energy policies and the economic mechanisms to encourage a balanced energy market are largely in place in all OECD countries, but that there are no grounds for believing that energy problems have been solved. On the other hand, the report does reveal that the effective implementation of these policies, combined with the sharp oil price increases of a few

TABLE 1. OECD energy demand and the world oil balance (Figures are million b/d)[1]

OECD	**1980**	**1985**	**1990**	**2000**
Total primary energy	79.1	81-82	89-93	105-121
Non-oil energy demand	40.4	46	55-56	72-78
Oil demand	38.7	35-36	34-37	33-43
Oil import demand	24.2	21	20-24	18-30
World oil demand				
OECD	38.7	35-36	34-37	33-43
OPEC	2.9	4	5-6	8-9
Non-OPEC LDCs[2]	7.9	9-10	11-13	17-22
Total	49.5	48-50	50-56	58-74
World oil supply				
OECD[3]	14.8	15	14-13	15-13
OPEC[4]	27.5	23-26	27-29	24-28
Non-OPEC LDCs	5.3	8-9	8-11	9-13
CPE[5] net exports (imports)	1.3	1-(1)	0-(2)	0-(2)
Processing gains[6]	0.6	0.6	0.6	0.6
Total	49.5	48-50	50-52	49-53
Excess demand	—	—	0-4	9-21

1. Conversion factor: 1 million b/d = 48.2 million tons of oil equivalent (toe). 1 toe = 7.57 bbl.
2. Non-OPEC developing countries (also includes South Africa and Israel).
3. Including synfuels.
4. OPEC estimates are basically for "possible" production as indicated by reserves and projected additions to reserves. In addition, estimates for 1985 reflect low demand. For 1990 and 2000, oil production in capital-surplus countries such as Saudi Arabia, Kuwait, and Abu Dhabi is less than technical capacity.
5. Centrally planned economies: European and non-European Comecon countries, China, North Korea, Laos, Cambodia, Yugoslavia, and Albania.
6. Gains in volume (not in weight) due to the refining process.

years ago, already has yielded positive and, it is hoped, lasting results.

Stable Oil Production

Overall world oil production, outside the centrally planned economies (CPEs), is not expected by IEA to grow much beyond its 1980 level of roughly 50 million b/d. Because of the recent reductions in world demand, oil production, particularly in OPEC countries, still may be below available capacity during the mid-1980s. But, towards the latter part of the 1980s and into the 1990s, oil markets are expected to tighten substantially when demand will once again match available world supplies.

Barring political disruptions, OPEC is expected to maintain its share in total oil supply at roughly 50%. Responding to a resumption in growth in demand, its production may return to levels of around 28 million b/d by 1990, but must be expected to level off after that period as a result of more tangible depletion concerns in a number of countries and significant production declines in others. At the same time, amounts available for export of either crude or oil products will shrink as OPEC's domestic consumpton grows an estimated threefold, to some 8 million to 9 million b/d by the year 2000.

The IEA report says there are favorable prospects for increasing oil production in other developing countries. Because a number of these countries are only beginning to explore and tap their reserves, a doubling of their aggregate production, up to about 13 million b/d, seems possible. Much of the growth in output will come from Mexico, the emerging major producer outside OPEC. But growing oil demand will continue to outpace production in developing countries.

Zero Contribution

A virtual zero trade position is assumed by IEA regarding the aggregate contribution of the CPEs to the world oil market, but there is some possibility that the group may become a small net importer of oil by the late 1980s. While oil production in China is expected to increase in the long run, Soviet oil output appears to be reaching a plateau, and may level off in the future. Resulting trends towards more CPE purchases in the world market, however, might be effectively constrained by scarcity of hard currency. In that case, the inability to meet desirable levels of oil use would contribute to low economic growth rates, particularly in the smaller Comecon countries.

OECD oil production, which was just under 15 million b/d in 1980, is expected by IEA to decline after the mid-1980s, and only unexpectedly large reserve additions or substantial volumes of synthetic liquids can keep oil output from dropping further in the 1990s. Under this assumption, oil production (including synthetic oil) in OECD countries may rise again to levels of around 15 million b/d by the year 2000.

Natural Gas Share

The share of natural gas in total energy use is unlikely to grow over the next 20 years. Because energy price levels are critical to both gas use and domestic production, only rising oil prices would provide the climate for further expansion of natural gas. Even under those circumstances, however, the share of natural gas would remain stable at around 19% for total OECD by the end of the century.

The importance of natural gas will vary regionally, however. In North America, where high gas use was sustained by domestic production in the past, constrained gas output may lead to a decrease from a present share of more than 25% to 16%-21% in the 1990s. In contrast, gas is projected to grow in importance in the Pacific region from only 7% to 13%-17%. In Europe, where natural gas now accounts for 14% of total energy, the future share could range from 12% to 16%.

Even to maintain a stable share of natural gas, significant additions to OECD gas supply will have to come from expanded trade with non-OECD producers. Aggregate OECD gas production is not likely to increase significantly. Existing geological resources are depleting, and only under the assumption of rising oil prices is there an outlook that production can be kept at about present levels through development of new deposits, mainly in Canada, the United Kingdom, Norway, and Australia. Gas imports, therefore, would tend to grow five to sixfold over the next 20 years.

Large amounts of gas would be available from the USSR, Algeria, Indonesia, Mexico, and some other potential producers. Conversely, dependence of OECD countries on imported gas is bound to increase. In Europe, in particular, imports now account for 12% of total gas supplies, but could grow to 45% to 50% by 2000, representing about 6% to 8% of total primary energy requirements.

The actual size of future gas imports will depend on the extent to which appropriate solutions can be worked out with respect to the two major issues associated with gas trade – price and security of supply. There is great uncertainty about the levels to which gas prices should adjust in the future.

In purely economic terms, gas use will increase in consumer markets only if competitive prices make it attractive as an alternative to other fuels. At the same time, utilities considering long-term supply contracts and investment in capital-intensive gas infrastructure depend on a reasonable outlook for secure returns from their projects. Prices at the producer level will have to make allowance for these concerns if gas trade is to grow. In fact, attempts by some producers to peg gas prices to crude oil on a long-term basis tend to reduce existing price diffentials and may seriously limit the scope for increased use of imported gas in OECD countries.

As gas imports tend to grow, IEA warns, arrangements will have to be made to see that oil dependence, while being significantly diminished, would not simply be replaced by a new vulnerability to disruptions in external gas supplies. Possible risks could be contained by a number of preventive measures, such as integration of existing gas grids, additional storage, and surge production capacity.

(Continued)

In addition, fuel-switching possibilities at the level of individual power or industrial plants can contribute to greater supply security. All these methods are costly, however, and they require time to come on stream. IEA concludes, therefore, that they will represent an upper limit to the growth of gas imports.

The International Energy Agency was established in 1974 by the Organization for Economic Cooperation and Development to found an international energy program. The OECD was formed in 1960. Its members are Australia, Austria, Belgium, Canada, Denmark, Finland, France, the Federal Republic of Germany, Greece, Iceland, Ireland, Italy, Japan, Luxembourg, the Netherlands, New Zealand, Norway, Portugal, Spain, Sweden, Switzerland, Turkey, the United Kingdom, and the United States.

The first oil production in the Baltic Sea came a step closer recently when Deutsche Texaco AG and Wintershall AG decided to proceed with development of the Schwedeneck See field located approximately 3 miles offshore West Germany. The field was discovered 4 years ago by a joint venture in which both companies have a 50% interest.

Two permanent drilling and production platforms are to be installed, and 14 producing wells are to be drilled directionally to reach the oil-bearing sandstone at a depth of about 4,900 ft. Production is estimated to begin in late 1984.

The platforms will be connected by a buried pipeline system leading to a land station near the village of Waabs, located about 2 miles from the coast. The oil will be pretreated at the land station and then pumped through an 8-in. pipeline to Deutsche Texaco's Heide refinery.

Marine geologists of the United States Geological Survey, working under an agreement with Australia and New Zealand, report some encouraging results from an assessment of the petroleum potential of the southwest Pacific Ocean.

The geologists, David W. Scholl and Tracy L. Vallier, suggest that sedimentary rocks and structures under the southern Tonga platform seem to have geologic potential for oil and gas resources, but they point out that any meaningful evaluation of the petroleum potential can only come after studies of rocks dredged from the ridge, and after examination of fully processed, multifold reflection profiles.

Scholl and Vallier believe, however, that trial sampling carried out last year from the USGS research vessel S. P. Lee justifies design of a dredging program to sample the platform's entire sedimentary sequence more adequately. They say that defining the ridge's history of vertical tectonism is crucial to assessing its resource potential.

Among the geologic problems that need clarification are:

- Are the mound-like bodies acoustically detected within the western or thicker parts of the platform sections in fact mid-Tertiary reefs, or could they be volcanic or intrusive masses related to arc volcanism?
- Is there any organic geochemical evidence (provided by laboratory studies of the dredged rocks) that the platform section has generated or been the habitat for petroleum hydrocarbon products?

An oil discovery in eastern Colombia was tested at a combined rate of 6,800 b/d from four zones.

The well, Cravo Sur No. 1, was drilled in the Casanare contract area by a group comprising Elf Aquitaine Colombia S.A., the operator, Houston Oil & Minerals of Colombia Inc., and LL&E Colombia Inc. It was drilled to a total depth of 11,500 ft, and tested oil from three Cretaceous-age reservoirs and one of Tertiary age. Rates ranged from 466 to 3,700 b/d of medium-gravity sweet oil and low gas-oil ratios.

The companies are exploring in association with Ecopetrol. ■

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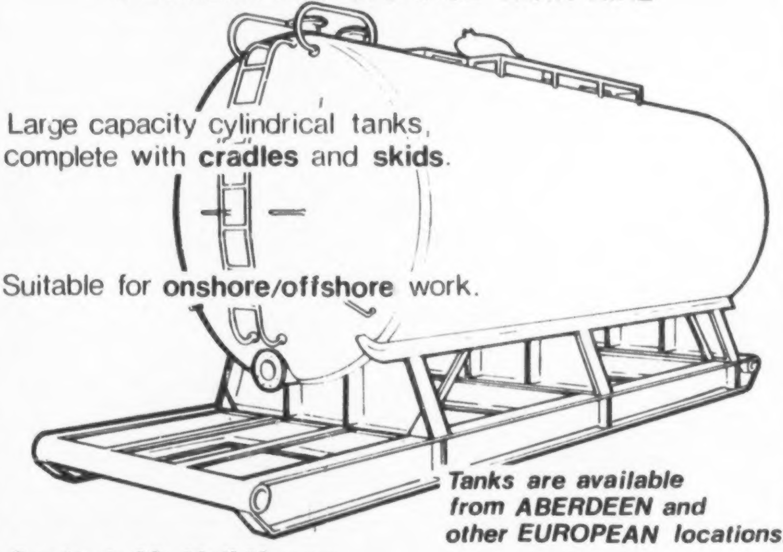

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International Rotary Rig Report, prepared by Hughes Tool Co.
(Figures in parentheses indicate how many
of each country's rigs are offshore rigs.)

	Oct. 1981	Sept. 1982	Oct. 1982
Africa			
Algeria	74	90	90
Angola	8(6)	13(9)	13(9)
Benin	0	1(1)	1(1)
Cameroun	6(6)	7(6)	7(6)
Chad	1	1	1
Gabon	15(11)	10(8)	10(8)
Guinea	0	1(1)	1(1)
Ivory Coast	6(6)	4(4)	5(5)
Libya	33(2)	28(1)	28(1)
Morocco	6(1)	5	5
Niger	5	1	1
Nigeria	28(9)	25(10)	25(10)
Congo	7(5)	5(4)	5(4)
Zaire	3(1)	2(1)	2(1)
Senegal	0	1	1
Sierra Leone	0	1(1)	1(1)
South Africa	2(2)	2(2)	2(2)
Sudan	2	2	2
Tunisia	11(3)	11(3)	11(3)
	207(52)	**210(51)**	**211(52)**
Europe			
Austria	10	8	8
Denmark	2(2)	2(2)	2(2)
France	30(2)	14	13
Germany	28	31	31
Greece	6(3)	4(2)	4(2)
Holland	19(9)	23(15)	23(15)
Ireland	0	0	1
Italy	33(8)	34(7)	34(7)
Norway	12(12)	11(11)	13(13)
Portugal	1	1	1
Spain	9(2)	12(5)	12(5)
Switzerland	1	1	1
United Kingdom	58(53)	54(53)	55(54)
Yugoslavia	22	25	25
	231(91)	**220(95)**	**223(98)**
Far East			
Bangladesh	5	7	6
Brunei	7(6)	11(8)	12(8)
Burma	31	33	33
India	45(8)	51(11)	51(11)
Indonesia	89(29)	96(36)	91(33)
Japan	17(2)	21(2)	23(2)
Malaysia	12(12)	14(14)	13(13)
Pakistan	15	17	17
Philippines	15(3)	13(3)	11(2)
Sri Lanka	1(1)	0	0
Taiwan	7(1)	2(1)	1(1)
Thailand	8(5)	8(5)	8(5)
	252(67)	**273(80)**	**266(74)**
Latin America			
Argentina	55(4)	69(1)	59(1)
Barbados	1	1	1
Bolivia	14	10	10
Brazil	85(29)	95(33)	93(31)
Chile	7(4)	7(3)	7(3)
Colombia	22	19	23(1)
Costa Rica	0	1	1
Dominican Rep.	1	1	0
Ecuador	4	5(1)	6(1)
Guatemala	7	2	2
Mexico	220(19)	194(23)	194(23)
Paraguay	1	0	0
Peru	27(6)	22(6)	21(6)
Trinidad	15(7)	15(6)	12(4)
Venezuela	65(15)	70(17)	73(19)
	524(84)	**511(90)**	**502(89)**
Middle East			
Abu Dhabi	35(16)	45(27)	44(27)
Bahrain	1	1	1
Dúbai	3(2)	3(3)	2(2)
Egypt	30(19)	39(25)	40(22)
Iran	0	0	11(2)
Iraq	5	5	28
Kuwait	3	5	5
Oman	11	12(2)	12(2)
Qatar	6(3)	5(2)	5(2)
Ras Al Khaimah	1	2(1)	2(1)
Saudi Arabia	29(13)	29(12)	29(12)
Sharjah	3(1)	3	3
Syria	16	15	15
Turkey	26	43	43
Umm Al Qaiwain	1	1	1
	170(54)	**208(72)**	**241(70)**
South Pacific			
Australia	34(7)	32(9)	28(8)
New Zealand	2(1)	1	1
	36(8)	**33(9)**	**29(8)**
North America			
Canada	214(7)	163(10)	198(6)
United States	4,339(259)	2,439(230)	2,380(226)
Totals	**5,973(622)**	**4,057(637)**	**4,050(623)**

Delta-Beaufort Sea resources that could see production before the end of the decade. Early stages of the program could see a small-diameter pipeline built from the Beaufort Sea to link with a line to be constructed from Norman Wells to northern Alberta.

Esso says such a small-scale approach could be brought on stream 2 to 4 years in advance of major development. And it could provide valuable data and information on which to plan larger development projects.

Elsewhere in the arctic, Panarctic Oils Ltd., as the operator for 66 companies, has just reached an agreement with the Canadian government covering 13 offshore and 7 onshore exploration projects. The largest package of exploration agreements concluded at one time under the government's National Energy Program and the new Canada Oil and Gas Act, the program covers some 35.5 million acres and could result in the expenditure of approximately $700 million over the next 5 years.

U.S. Prospects

Development drillers in the U.S. are excited these days about the Santa Maria Basin area offshore Southern California where finds late last year by Chevron USA and Phillips Petroleum and by a Texaco group indicate a giant oil discovery. Texaco already has ordered a 48-slot platform for development of its discovery, and total recoverable reserves for the basin are being put at between 1 billion and 2 billion barrels of oil.

Elsewhere in the U.S., development drillers tend to be pessimistic about 1983 despite glowing reports about oil field economics. The Tulsa marketing consultant Robert A. Spears, for example, told a Valve Manufacturers Association workshop in Houston recently that domestic oil and gas producers' profitability has never been better. "Compared with 1981," he said, "the weighted value of oil and gas at the wellhead is up about 2%. Costs are down 25% to 30%."

NL Industries Inc., however, says that "Weakness in the economy, reduced natural gas demand, lower levels of external funding, and a general sense of caution throughout the petroleum industry" are expected to prevail during early 1983. Thereafter, the company says, drilling activity should increase gradually during the balance of the year. Rowan Drilling Co. expects onshore rig utilization in the U.S. to stay below 75% all year.

But Exxon USA says its goal this year is to increase domestic reserves. And it plans to accomplish this by "exploring thoroughly areas with oil and gas potential and by developing discoveries rapidly". This tactic enabled Exxon USA in 1981 to add more to its onshore reserves (excluding Alaska) than it produced. And that was the first time such a thing had happened since the late 1960s. ■

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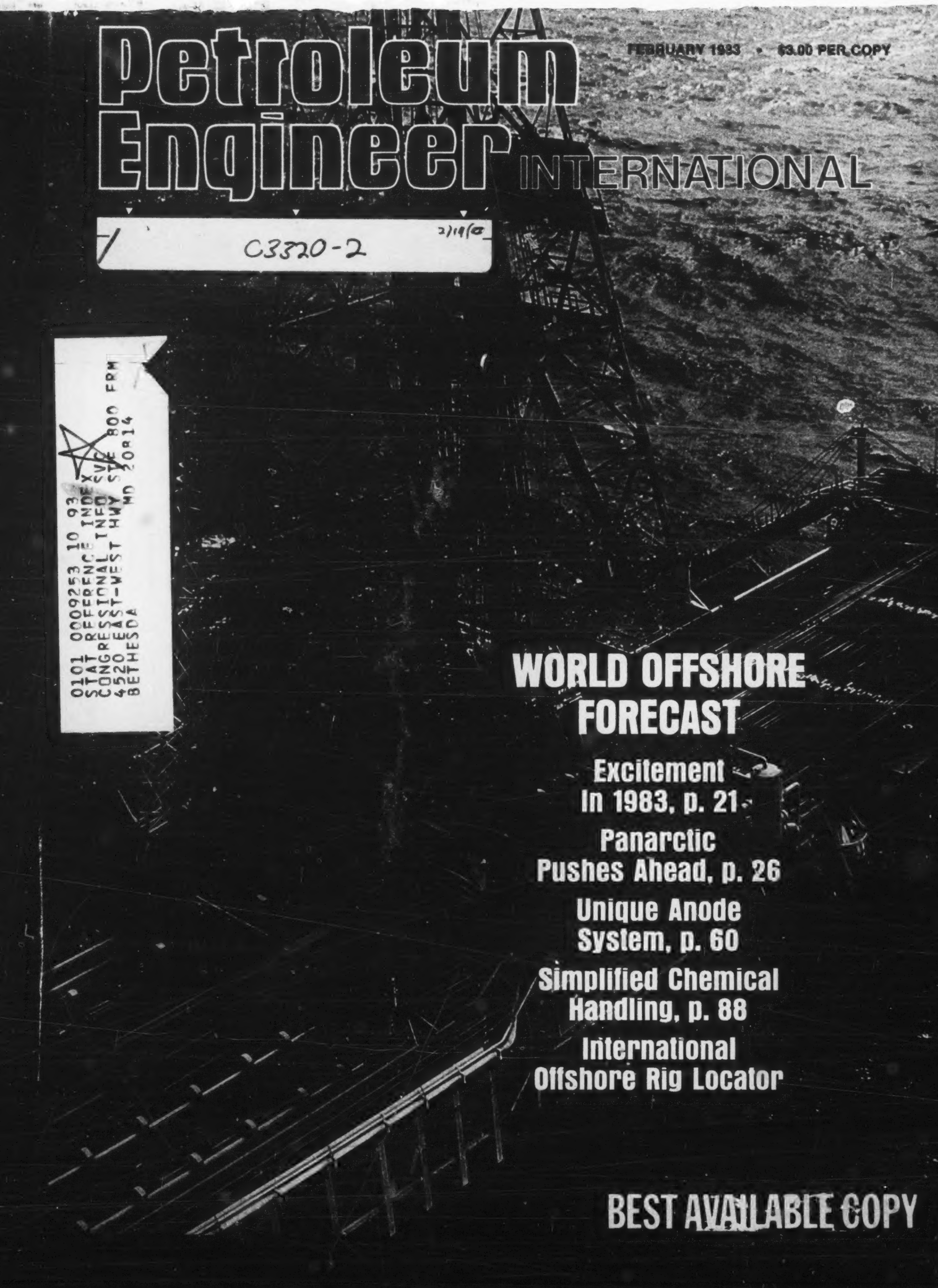

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International Offshore Rig Locator

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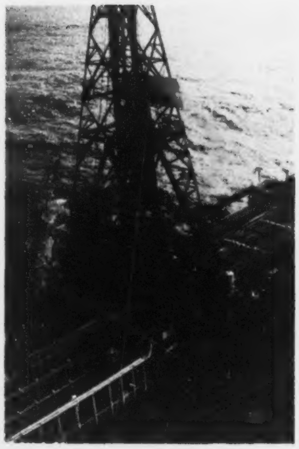

ABOUT THE COVER: The drillship Glomar Atlantic is shown drilling the Texaco U.S.A. group's well that confirmed the big oil discovery recently in the Santa Maria Basin offshore Southern California.

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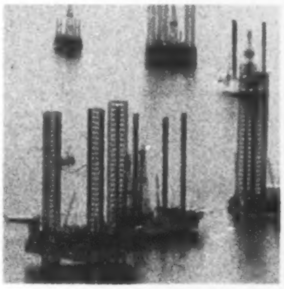
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Engineering Profits into Energy Operations

1982 Rotary Rig Activity Second Only To 1981

Final figures for 1982 put the rotary rig count average at 3,104.8, which is a far cry from 1981's 3,973.5 but still is good enough for 1982 to claim the title as the second best drilling year in U.S. history.

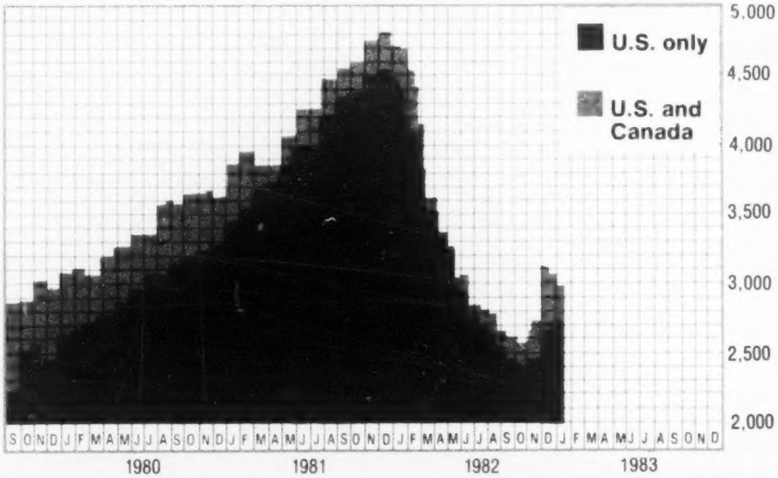
Completions-wise, 1982 is No. 1. Early statistics compiled by Petroleum Information Corp., Denver, Colo., put 1982 completions at 84,693 – a 7.4% increase over the 78,884 completions Petroleum Information lists for 1981. Total footage recorded by PI for 1982 is 398.75 million, an increase of 34.3 million ft (9.4%) over the 1981 total. The average completion in 1982 was 4,708 ft deep, or 88 ft deeper than the 1981 average.

Most of 1982's completions were development wells. The 67,134 development wells counted by PI represent a 7% increase over 1981, and they include 37,576 oil wells and 15,240 gas wells.

Rotary Rigs Actually Making Hole In United States & Canada

As Reported To International Association Of Drilling Contractors By Hughes Tool Co.

	Dec. 20, 1982	Dec. 27, 1982	Jan. 3, 1983	Jan. 10, 1983
Alabama				
Land	13	14	14	11
Inland Waters	2	2	2	2
Total	15	16	16	13
Alaska				
Land	14	16	16	13
Offshore	3	3	2	2
Total	17	19	18	15
Arkansas	20	19	24	26
Arizona	0	0	0	1
California				
Land	98	105	107	103
Offshore	16	16	18	20
Total	114	121	125	123
Colorado	54	57	71	69
Florida	3	3	3	3
Hawaii	1	1	1	1
Illinois	79	75	76	55
Indiana	8	8	7	8
Kansas	147	160	152	139
Kentucky	6	4	5	3
North Louisiana	38	39	38	48
South Louisiana				
Inland Waters	58	57	61	63
Land	85	96	100	99
Offshore	122	127	125	131
Total	303	319	324	341
Michigan	38	36	38	42
Mississippi	38	41	39	39
Montana	30	27	27	30
Nebraska	12	9	7	7
Nevada	2	2	1	1
New Mexico	106	106	108	91
New York	17	20	16	16
North Dakota	50	50	45	47
Ohio	67	71	78	68
Oklahoma	345	348	368	378
Pennsylvania	36	31	28	26
South Dakota	2	2	1	1
Tennessee	1	0	1	1
Texas				
Offshore	70	66	63	62
Inland Waters	11	11	8	9
Dist. 1-S. Central Tex.	38	32	26	27
Dist. 2-Middle Tex. Coast	43	47	46	46
Dist. 3-Upper Tex. Coast	105	124	130	131
Dist. 4-Lower Tex. Coast	114	112	117	112
Dist. 5-Northeast Tex.	19	20	20	17
Dist. 6-Far Northeast Tex.	85	84	81	87
Dist. 7B-North Central Tex.	65	72	76	72
Dist. 7C-West Central Tex.	68	77	72	72
Dist. 8-Far West Tex.	136	125	121	115
Dist. 8A-West Tex	78	74	70	67
Dist. 9-North Tex.	79	81	77	79
Dist. 10-Tex. Panhandle	52	52	47	55
Total	963	977	954	951
Utah	40	43	38	39
Virginia	4	3	2	2
West Virginia	52	57	49	55
Wyoming	138	143	134	132
Total U.S.	2,708	2,768	2,756	2,723
Canada				
Land	361	347	232	235
Offshore	3	5	6	6
U.S. and Canada	3,072	3,120	2,994	2,964



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Fire Study Covers Causes and Cures

An offshore fire that begins with an explosion is about twice as likely to develop into a large fire as one that starts without an explosion, according to a study conducted by the Research Division of Det norske Veritas. The study, a statistical survey of fire and explosion accidents in the Gulf of Mexico, considered the causes, the development, and the consequences of the more than 300 such accidents that occurred in the Gulf between 1956 and the end of 1981. Accidents, the study says, which caused the deaths of about 80 persons and injured more than 200 others.

Specifically, the DnV study focuses on the official reports for 140 accidents that occurred in the Gulf from 1975 to 1980. Two of the accidents resulted in loss of the platform. In both cases, the well blew out and then caught fire.

Nine accidents caused what the study calls major damage to the platforms, but only one of them was caused by a blowout followed by a fire.

Damage Limited

More than half of the accidents (72) resulted in little or no damage. In another 32% of the cases, damage was limited to localized platform units.

In categorizing offshore accidents, the DnV study indicates that almost half (46%) of the accidents were caused by mechanical failure. Eleven accidents (7.9%) were caused by unsafe design. And unsafe acts and procedures contributed to a combined total of 50 accidents, or 35.7%.

TABLE 1. Number of accidents for each property damage class

Damage class	Extent of damage	Number of accidents	Percent of accidents
Loss	Loss of platform	2	1.4
Major	Major damage to platform	9	6.4
Local	Major damage to local area	13	9.3
Minor	Damage to local units	44	31.4
Nocons	Little or no damage	72	51.4

In the category "unsafe acts or procedures", 90% of the accidents are minor. And 78% of the "mechanical failure" accidents are minor, although mechanical failure is the most important category for accidents in the "serious" category.

Summertime (from April through September) is most conducive to injuries, according to the DnV study, which found that the average number of fire and explosion accidents during the years 1972 through 1977 was 17.2 in the summer and 12.2 in the winter. As for time of day, the study indicates that the number of accidents reaches its peak during the noon hours, from 11 a.m. to 1 p.m. Breaking this down, the study shows that accidents due to unsafe acts or procedures happen more frequently during the middle of the day. Some 26 out of 40 accidents in these categories (65%) occurred between 8 a.m. and 4 p.m., the hours when offshore activity levels are highest.

Of fuels involved in fires and explosions, the DnV study shows that gas, which has been present in 64% of the incidents, is predominant. The relative frequency of involvement of oil, condensate, and diesel fuel, however, is shown to be higher for the more-serious accidents than it is for less severe ones.

Fires Mostly Small

Approximately 75% of the fires were reported as small fires, which means that they involved local units only. Another 15% of the fires were of medium or large sizes – meaning they involved several units or the entire structure.

Of the 15 large fires studied, eight started as small fires and developed into large ones. The other seven started as large fires, which means that the fires had become large before any reactions or firefighting were initiated. Two of these large fires started with blowouts followed by ignition. This means that a large fire can either start as a small fire, or it may immediately burst into a large fire.

Explosions were involved in 19 of the accidents. Most of the explosions (16) were small and caused little or no damage. Three of the explosions caused extensive local damage. The 19 explosions were distributed as:

- 1 – fire followed by small explosion.
- 5 – explosion only.
- 9 – explosion followed by small fire.
- 4 – explosion followed by large fire.

Thus, in 26% of the cases, the explosion occurred without a fire. Of the fires occurring after an explosion, 70% are small, while 30% are large. This indicates, DnV says, that a fire initiated by an explosion has about twice as much chance of developing into a large fire as a fire that starts without an explosion.

Smoke Observation

Smoke reportedly was important in 10 of the incidents studied. In three cases, the fire was detected by observation of smoke; and inhalation of smoke and dry chemicals was the cause of injuries in two of the accidents.

In five cases, smoke was an obstruction to the firefighting (in four of these cases, the smoke was so heavy that it prevented personnel from entering the area to fight the fire).

The unit of equipment most often involved in offshore fires and explosions seems to be the compressor, which was cited in 24% of the incidents studied. Engines and generators also are involved in large numbers of incidents, with 15% and 14%, respectively. DnV points out, however, that the relative numbers of different kinds of equipment are different for the different damage classes. Engines and glycol equipment, for example, are involved in a number of smaller accidents, but they are not involved in any of the more serious accidents involved in the Gulf of Mexico study.

TABLE 2. Property damage by accident category, indicating number of accidents within each class and category

Basic accident Category	Property damage class					Sum	Percent
	Loss	Major	Local	Minor	Nocons		
Act of God	0	0	1	0	2	3	2.1
Improper design	0	0	0	6	5	11	7.9
Jury-rigged system	0	0	0	1	1	2	1.4
Mechanical failure	2	4	8	20	30	64	45.7
Ship collision	0	1	0	0	0	1	0.7
Unsafe act	0	1	0	2	6	9	6.4
Unsafe procedure	0	2	1	10	18	31	22.1
Other	0	1	3	5	10	19	13.6

Ignition Source

The most prevalent ignition source for offshore fires seems to be "engines and exhausts", which were involved in 45 accidents – both minor and major.

"Welding/cutting" and "electric" are cited as the ignition sources in 17% and 15% of the accidents, respectively. In the more serious accident categories, however, eight accidents were electrically ignited, while only one was ignited by welding/cutting.

Leaking flanges and unions appear to be the most important fuel source for offshore accidents, with 26 of them having been responsible for both small and large fires or explosions. Tanks, vessels, pits, etc., are second in importance, with 18 incidents, and valves are third, with 16 citations.

Gas through the exhaust was the fuel source in eight of the fires, all of which resulted in small property damage.

Accident reports for a number of the incidents studied include more than one initial event – for example both a leak and a welder might be given as the initial event for the same accident. Nevertheless, leaks were cited as the initial event in 37 of the accidents (26%). Welding/cutting was mentioned in 24 incidents (17%), and startup of engines or generators was involved 19 times (14%). None of the startup accidents, however, involved large property damage.

Weather conditions were reported as being important in 17 accident cases, in 3 or 4 of which calm weather with no wind allowed gas to accumulate. In another case, wind is suspected of having blown slag from a cutting, thereby causing ignition. In three cases, wind blew the fuel in the direction of the ignition source.

In two cases, lightning caused ignition, and in two other cases it was the probable cause of ignition.

Strong winds helped spread the flames in two cases, and in two other cases strong wind is said to have been a contributing factor to the accident.

In one case, the direction of the wind made extinguishing the fire easier.

Manual Detection

In 92 of the cases studied, the presence of fuel was not detected before the ignition occurred. In the 34 cases in which the presence of fuel was detected before the fire started, 30 were by manual detection and four by automatic detectors.

Because gas was the fuel in as much as 64% of the accidents, it seems remarkable that only four cases were detected by gas detectors. An explanation put forth by DnV is that the sensors might not have been situated in such a way as to detect the real presence of gas. The reports do not say if gas detectors reacted after the leak had been detected in other ways, however, so this may have been the case for some of the accidents.

Most of the accidents (122 of them) were detected by people who saw the fire or explosion. In another 10 cases, the fire was detected by people seeing smoke or hearing noise. Three fires were detected by automatic fire detection systems.

Most offshore fires are put out by the use of hand-held fire extinguishers, according to the DnV study which lists 47 (or 34%) of the fires studied as having been extinguished that way. Another 30 fires were put out by hand-held extinguishers in cooperation with other means of extinction, and 29 fires burned themselves out due to lack of fuel. In 18 cases, water from assisting boats was used to put out the fire.

Firefighting is reported to have started immediately or within a minute after detection in 65% of the cases. And 36% of the fires were extinguished either immediately or within a minute. Some 20 fires lasted for more than an hour.

Regarding safety systems, the DnV study reports that emergency shutdown systems worked properly in 11 cases. In one case the system did not work because fusible plugs around a burning pump didn't melt.

Automatic Systems

Automatic firefighting systems are reported to have worked in six cases. They are reported not to have worked in two cases – in one of which the system didn't work because of internal corrosion of a firing pin. In the other case, heavy duty CO_2 equipment didn't work because it was either burned or isolated by the intense heat.

Blowout preventers reportedly failed in two cases. And in one case a gas detector system that should have shut down the generators somehow failed to operate.

Low-pressure sensors should have shut off the fuel in two cases. In one case it did. In the other it didn't because the pressure decrease was too low.

Three major accidents occurred on platforms with personnel who had not received training in firefighting. DnV says that in one of the accidents, the lack of firefighting training was the most important factor contributing to the gravity of the accident. In one of the other cases, it also seems that lack of training made the firefighting less efficient.

Firefighting equipment reportedly was in satisfactory condition in all but two of the accidents. In one case, the automatic extinguishing system did not operate when triggered. And in the other case, the rig's fire hose stations were not equipped with fog nozzles. This did not affect the accident, however.

Equipment Inaccessible

In one case, the firefighting equipment was inaccessible because of the accumulation of excessive equipment and pipe connections. In this case, the fire was extinguished by shutoff of the gas supply.

Human action was found to be the main or a contributing factor in 31% of the accidents surveyed. In another 6% of the accidents, indications are that human actions might have been of influence. Better control or maintenance, for example, might have prevented the accident in the first place.

TABLE 3. Property involved in fires and explosions (Some accidents include more than one of the equipment types.)

Equipment	Property damage class				Sum	Percent of cases
	Major	Local	Minor	Nocons		
Engines	0	0	3	18	21	15
Glycol equipment	0	0	3	5	8	6
Generator/turbine generators	2	3	6	8	19	14
Compressors	0	3	9	21	33	24
Line heaters	0	1	2	0	3	2
Pumps and pump drivers	1	3	4	5	13	9
Riser, pipes, tanks, drains, etc.	6	1	3	13	23	11
Other equipment	0	3	15	14	32	23

Human factors seem to be more often the cause of less-serious accidents than of the more-serious ones.

The 140 accidents examined by DnV resulted in seven deaths and 90 cases of injuires. By far, the most dangerous accident category is "unsafe procedure", which accounted for six of the deaths and 42 of the injuries.

Most of the deaths happened in connection with accidents that also included severe property damage. Major accidents accounted for 82% of the deaths, but for only 17% of the total number of accidents.

For injuries, this tendency is not so predominant. The numbers of injuries per accident show that accidents that include more property damage also cause more injuries. Major accidents accounted for 38% of the injuries.

Kicks and Blowouts

The most dangerous initial events of accidents seem to be kicks and blowouts, which cause eight times as many deaths and four times as many injuries as does the average accident. Another finding of the DnV study is that accidents where gas is present result in deaths and injuries more often than do other accidents.

TABLE 4. Ignition sources for the accidents studied

Ignition source	Property damage class					Sum	Percent of cases
	Loss	Major	Local	Minor	Nocons		
Unknown	2	3	1	10	6	22	16
Welding and cutting	0	1	0	4	19	24	17
Engines and exhausts	0	2	5	12	26	45	32
Sparks (not electrical or exhaust)	0	1	0	0	4	5	4
Electric	0	1	7	6	7	21	15
Hot surface (other than engine and exhaust)	0	0	0	0	0	0	0
Lightening	0	0	0	1	3	4	3
Self ignition	0	0	0	1	0	1	1
Cigarette, lighter, match	0	0	0	0	1	1	1
Other	0	1	0	6	4	10	7

Gas was present as fuel in 78% of the cases which resulted in deaths or injuries. For the 12 incidents in which gas was ignited by welding or cutting, injuries occurred in nine of them. The average injury rate for those cases is 1.08 injuries per accident, mainly because the gas is ignited close to the person using the welding or cutting equipment.

As might be expected, the DnV study finds that accidents that include explosions are more dangerous than accidents that include only fires. The death rate is 33 times as high and injury rate eight times as high for fires that include explosions than for fires that do not.

Regarding prevention of accidents, the study indicates that design changes might have prevented 37 of the accidents, and that better inspection would have helped in 34 others. Checking for and removing hydrocarbons before welding or cutting is recommended in 19 cases. The most often suggested design change is to vent exhausts differently. It was recommended in 11 cases.

Nine accidents were caused by unsafe acts, and recommendations for preventing such accidents in the future include:

- No more use of deep fryers in preparation of midnight meal.
- Periodic checks of relief valves.
- Check for hydrocarbons before welding. Do not start welding machine until welding operations are ready to commence.
- Prevent dumping directly from a pressure vessel to the sump pile.
- Follow proper precautions when replacing gauges under pressure. Insulate exposed piping if possible.
- Seal even small deck openings before welding. Do not have flammable fluids in tanks with open tops.
- Do not use quick-connect fittings on natural gas supply. Install signs to identify the natural gas line and the nearby air line.
- Proper startup for gas generators. Train in the use of start aids.
- Shut off all hydrocarbon sources before repairing pipes containing hydrocarbons. Use brass and not steel hammer when tightening or loosening unions in hydrocarbon piping. ■

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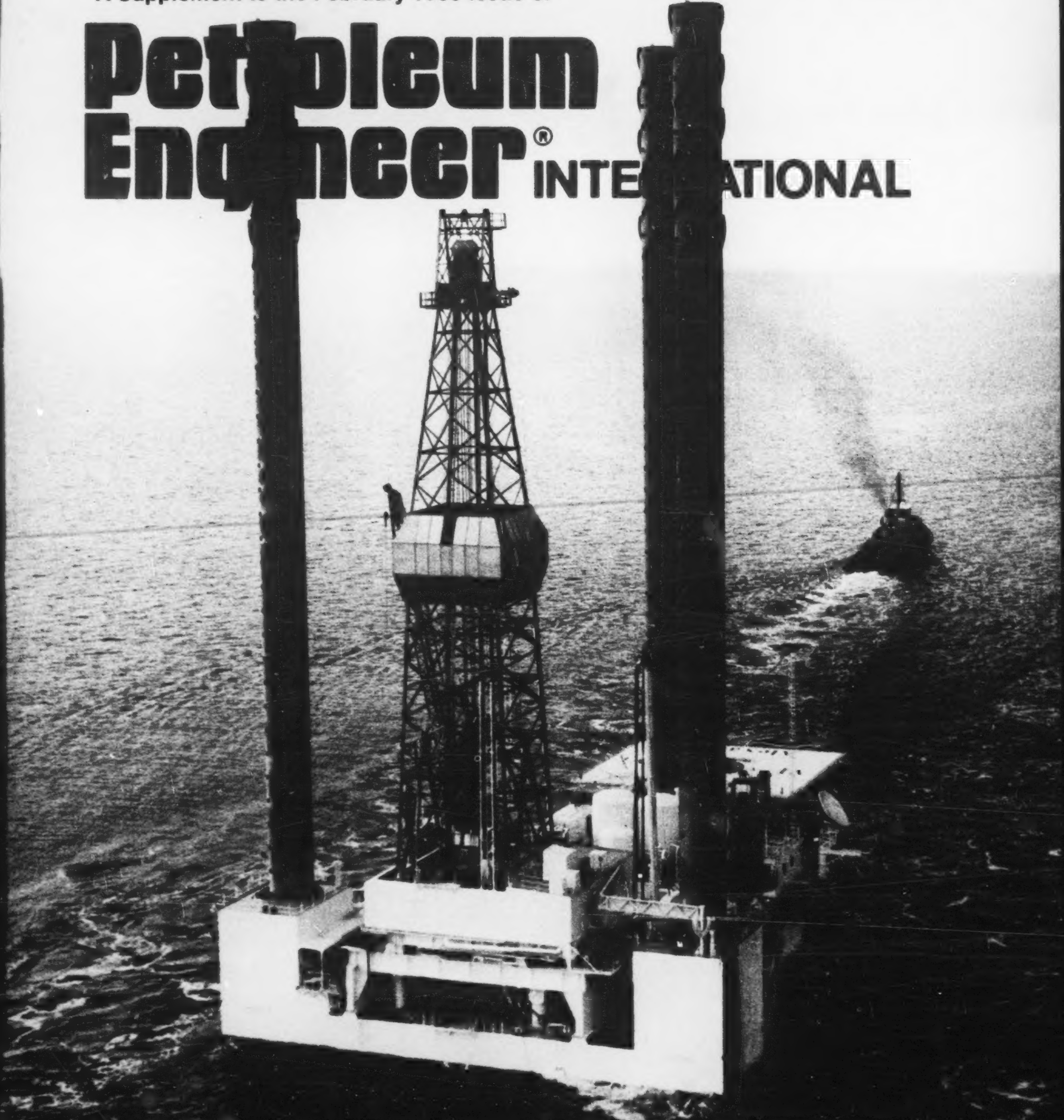
SPRING 1983 INTERNATIONAL
OFFSHORE RIG LOCATOR

A Supplement to the February 1983 Issue of

Petroleum Engineer® INTERNATIONAL



For over a quarter century, drilling contractors have given this magazine Rig Locator data, providing operators who let drilling contracts with mechanical specifications and locations of contract rotary rigs throughout the Free World. Since the Rig Locator's 1955 origin, other organizations periodically attempt similar concepts, while others shuffle and republish PEI Rig Locator data. This Rig Locator, detailing 995 offshore rigs, is the most complete presentation of contract offshore drilling rigs ever published.

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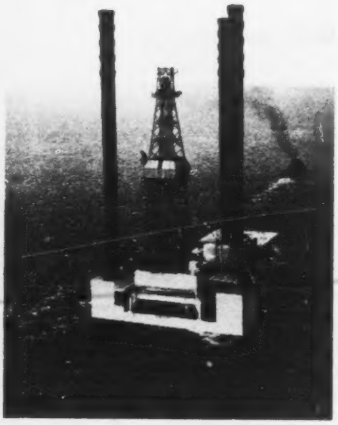
OFFSHORE RIG LOCATOR



Griffin-Alexander Drilling Co.'s jackup rig, Griffin-Alexander VI, under tow to its destination in the Gulf of Mexico. (Photo courtesy Bethlehem Steel Corp.)

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ABBREVIATIONS

Bethlehem Supply Co.	Beth
Cabot Corporation Machinery Division	Cabot/Franks
Continental-Emsco Co.	EMSCO
Gardner-Denver	Gar-Den
Howard-Turner Machine Works	Howard-Turner
Hydra Rig inc.	Hydra
Ideco Inc.	Ideco
Mid-Continent Supply	M-CSCO
National Supply	Natl
OIME	OIME
OILWELL Div. (U.S. Steel)	OILWELL
Pool Company	Pool
Skytop/Brewster	Brwstr
Unit Rig Company	Unit
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HUTHNANCE DRILLING CO 601 Jefferson Houston TX 77002 713-659-4816

INTEROCEAN DRILLING SA PO Box 2765 Houston TX 77001 713-871-7500
INTERNATIONAL CHANDLERS 1901 N Akard Cumberland Hill Dallas TX 75201 214-653-8700

JAPAN DRILLING CO LTD No 11 Mori Bldg 6-4 Toranomon 2-chome Tokyo Japan 501-7391
J F P WELL SERVICE INC 13231 Champion Forest Dr Ste 210 Houston TX 77069 713-893-4464
J L OFFSHORE DRILLING INC 10575 Katy Fwy Ste 260 Houston TX 77024 713-932-1213

KCA DRILLING GROUP PLC 227 Shepherds Bush Rd London W6 7AS England 01-741 4811
KEYDRIL CO 2000 Capital Bank Plaza 333 Clay St Houston TX 77002 713-754-3769
KEYES OFFSHORE INC 2425 Fountainview Dr Ste 220 Houston TX 77057 713-785-4010
KINGSWORTH MARINE DRILLING LTD 53 Leadenhall St London EC3A 2BR England 01-481-2020

LIVINGSTON OILWELL SERV INC PO Box 2166 298 Prospect St Houma LA 70361 504-868-1430
LOFFLAND BROS CO PO Box 2847 Tulsa OK 74101 918-622-9330

MAERSK DRILLING Esplanaden 50 DK-1098 Copenhagen Denmark 45-1-14-15-14
MAP DRILLING CO 416 Oil & Gas Bldg New Orleans LA 70112 504-524-6282
MARINE DRILLING CO 900 CCNB Center South Corpus Christi TX 78411 512-884-8851
MARINE DRILLING SA 1901 N Akard Cumberland Hill Dallas TX 75201 214-653-8700
MARLIN DRILLING CO 1333 West Loop South Ste 780 Houston TX 77027-9178 713-627-1161
MATAGORDA MARINE DRILLING CO 7433 Leopard PO Box 10307 Corpus Christi TX 78410 512-289-1366
MAYRONNE CO PO Box 432 Harvey LA 70433 504-368-5911
MERIT DRILLING CO Box 79667 Houston TX 77079 713-493-1001
MGF DRILLING CO 2626 Richmond Ave Ste B Houston TX 77098 713-526-7236
MORAN DRILLING LTD 233 Benmar Houston TX 77080 713-820-1865
MORCO A/S PO Box 65 N-4056 Tananger Norway 04-696766

NATIONAL DRILLING CO PO Box 4017 Abu Dhabi UAE 820330
NICKLOS DRILLING CO 5200 Interfirst Plaza Houston TX 77022 713-658-8245
NOBLE DRILLING CORP 1924 S Utica Ste 600 Tulsa OK 74104 918-749-9901

OCEAN DRILLING & EXPL CO PO Box 61780 New Orleans LA 70161 504-561-2248
ODFJELL DRILLING & CONSULTING CO A/S Kokstadflaten 5, N 5065 Blomsterdalen Norway 05-22 77 80

PACNORSE DRILLING CORP PO Box 1401 Orange CA 92668 915-367-4181
PENROD DRILLING CO 1407 Main St Dallas TX 75202 214-651-0187
PERFORACIONES ALTA MAR CA Apartado No 1641 Maracaibo Venezuela
PERFORADORA MEXICO SA Insurgentes 432 9th Floor Mexico City 7 Mexico D F
PHOENIX MANAGEMENT CORP 10500 Westoffice Dr Houston TX 77042 713-784-2420
PLATFORM WELL SERV INC PO Box 53836 Lafayette LA 70505 318-237-5555
POOL ARABIA LTD PO Box 4271 Houston TX 77210 713-780-4999
POOL AUSTRALIA INC PO Box 4271 Houston TX 77210 713-780-4999
POOL CO AFFILIATES PO Box 4271 Houston TX 77210 713-780-4999
POOL-INTAIRDRIL LTD PO Box 4271 Houston TX 77210 713-780-4999
POOL OFFSHORE PO Box 4271 Houston TX 77210 713-780-4999
POOL SANTANA LTD PO Box 4271 Houston TX 77210 713-780-4999

QUARLES DRILLING CORP 7633 E 63rd Place Ste 500 Tulsa OK 74133 918-250-0515

READING & BATES DRILLING CO 901 Threadneedle Ste 200 PO Box 79627 Houston TX 77279 713-496-5000
REBSTOCK DRILLING CO 2601 Lexington Ave Kenner LA 70062 504-467-1321
RESOURCE DRILLING INC PO Box 4341 Houston TX 77210 713-871-8550
RICHTER DRILLING PTY LTD GPO Box 2197 Brisbane Qld Australia (07) 229-2544
RIO COLORADO S A Sarmiento 663 Buenos Aires Argentina 46-3211
RIO GRANDE DRILLING CO 2300 Tower Life Bldg San Antonio TX 78205 512-224-4572
ROSS DRILLING CO PO Box 265 3201 Sandefjord Norway 34-63481
ROWAN COMPANIES INC-US 5051 Westheimer 1900 Post Oak Tower Houston TX 77056 713-621-7800
ROWAN INTL INC 5051 Westheimer 1900 Post Oak Tower Houston TX 77056 713-621-7800

SAIPEM SpA Box 12072 S Donato Milanese 20097 (Milano) Italy 02.5201
SALEN PROTEXA DRILLING CO 11777 Katy Fwy Ste 300 South Bldg Houston TX 70079 713-496-7770
SANTA FE DRILLING CO 505 S Main St PO Box 1401 Orange CA 92668 714-558-1300
SAVAGE DRILLING INC 9525 Katy Fwy #309 Houston TX 77024 713-932-7299
SCAN DRILLING CO LTD 1704 Shaw Centre Scotts Rd Singapore 0922 Republic of Singapore 7377633
SEA DRILLING NETHERLANDS 1901 N Akard Cumberland Hill Dallas TX 75201 214-653-8700
SEDCO DUBAI LTD 1901 N Akard Dallas TX 75201 214-653-8700
SEDCO INC 1901 N Akard Cumberland Hill Dallas TX 75201 214-653-8700
SEDCO INTERNATIONAL SA 1901 N Akard Cumberland Hill Dallas TX 75201 214-653-8700
SEDCO MARITIME INC 1901 N Akard Cumberland Hill Dallas TX 75201 214-653-8700
SEDCO-UNDERSEAS DRILLING LTD 1901 N Akard Cumberland Hill Dallas TX 75201 214-653-8700
SERVICE EQUIPMENT & ENGINEERING INC 900 Dunn St Houma LA 70360 504-868-9010
DEAN SHANK DRILLING CO 2908 Engineers Rd Belle Chasse LA 70037 504-392-1685
SKINNER MARINE OPERATIONS LTD PO Box 46 San Fernando Trinidad West Indies 65-77265
A/S SMEDVIG DRILLING CO PO Box 110 4001 Stavanger Norway (04) 5-20040
SONAT OFFSHORE DRILLING INC GROUP PO Box 2765 Houston TX 77001 713-871-7500
SOUTH SEAS DRILLING CO PO Box 1401 Orange CA 92668 714-558-1300
SOUTHEASTERN DRILLING SERVICE INC 1901 N Akard Cumberland Hill Dallas TX 75201 214-653-8700
SOUTHEASTERN OCEAN DRILLING CO SA 1901 N Akard Cumberland Hill Dallas TX 75201 214-653-8700
STAVANGER DRILLING A/S PO Box 51 Skansegt 9 4001 Stavanger Norway 4745-32010

TELEDYNE MOVIBLE OFFSHORE INC PO Box 31936 Lafayette LA 70503 318-981-7100
TEMPLE DRILLING CO 3300 Capital Bank Plaza Houston TX 77002 713-759-0960
TRANSOCEAN DRILLING CO LTD PO Box 25861 Oklahoma City OK 73125 405-270-2804
TRANSWORLD DRILLING CO PO Box 25861 Oklahoma City OK 73125 405-270-2804
TROPIC DRILLING CO 17150 Butte Creek Rd Ste 200 Houston TX 77090 713-444-3970
TWO R DRILLING CO PO Box 1968 Houma LA 70361 504-876-6987

UNDERWATER GAS DEVELOPERS LTD Box 428 Port Colborne ON L3K 1B7 Canada 416-894-1731

WELL SERVICES LTD PO Box 152 San Fernando Trinidad West Indies 649-7531
WESTERN OCEANIC INC 515 S Post Oak Rd Houston TX 77027 713-629-2723
WESTERN OFFSHORE DRILLING AND EXPLORATION CO 3333 Michelson Dr Irvine CA 92730 714-975-7034
WHALEN DRILLING INC Rt B Box 390 W-2 Acadiana Regional Airport New Iberia LA 70560 318-364-6613
WHELESS DRILLING CO 920 Commercial Natl Bank Bldg Shreveport LA 71101 318-222-3137
WILH WILHELMSEN Roald Amundsens Gate 5 Oslo 1 Norway
WILSON BROS DRILLING CO PO Drawer 53628 Lafayette LA 70505 318-233-5950

ZAPATA OFFSHORE CO Zapata Tower PO Box 4240 Houston TX 77210 512-226-6497

International Contract Offshore Drilling Rigs

			BOP Stack				Water Depth			
Contractor	Rig name or no	Type	Size (ID)	Pressure rating	Drwwks make & model	Rated drlg depth with 4½ in. pipe	Rated	Current	Location	Status
					AFRICA					
ANGOLA										
Dyvi Drlg A/S	J/U Dyvi Gamma Trigone 2	Jackup	13.63	10000	NATL 1320UE	25,000	350	344	Blk Seixa-1	Drilling
Global Marine Drlg	Glomar Adriatic II	Jackup	13.63	10000	NATL 1625DE	25,000	300	300	Buffalo 1	Drilling
Santa Fe Drlg	Choctaw I	Semisubmersible	18.75	10000	NATL 1320UE	20,000	800			Drilling
Sedco Inc	Sedco 135G	Semisubmersible	13.63	10000	OILWELL E3000	25,000	800	118	Mayanga I	Drilling
	Sedco 150	Jackup	13.63	5000	EMSCO A800RE	10,000	150	90	71-10	Workover
	Sedco 251	Jackup	13.63	10000	EMSCO C2	20,000	250	197	TKA-8	Completion
	Sedneth Luanda	Jackup	13.63	10000	NATL 1320UE	20,000	200	81	Volo No 1	Drilling
CABINDA										
Keydril	Key Victoria	Jackup	13.63	5000	OILWELL E2000	20,000	250			Drilling
CAMEROON										
Cosifor	Navifor I	Tender	16.75	5000	NATL 1320UE	20,000	350	150		Drilling
	Navifor II	Tender	13.63	5000	NATL 1320UE	20,000	400	150		Drilling
Diamond M	Diamond M Don E McMahon	Jackup	13.63	10000	OILWELL E2000	25,000	100	20		Drilling
Foramer	Ile de la Reunion	Tender	13.63	5000	NATL 110DE	16,000	250	210	MBV 31	Drilling
Forex Neptune and/or Affil	Searex 2	Tender	11.00	10000	GAR-DEN 500E	11,000		350	EKM Platform	Workover
Western Oceanic	Western Polaris II	Jackup	13.63	10000	NATL 1320UE	20,000	250		BKM #5	Drilling
CONGO										
Cosifor	Navifor III	Tender	16.75	5000	NATL 1320UE	20,000	400	300		Drilling
	Navifor Norse	Drillship	16.63	10000	NATL 1320UE	20,000	600	300		Exploration Drilling
Foramer	Ile de Re	Tender	16.75	5000	NATL 1320DE	20,000	300	210	LAI 12	Drilling
	Ile de Sein	Tender	16.75	5000	NATL 1320DE	20,000	400		YAM 224	Drilling
Reading & Bates	Dave Dodge	Platform/Tender	20.00	5000	OILWELL 840E	18,000			YAF #3	Contracted To Elf
EGYPT										
Dixilyn-Field Drlg	82	Jackup	13.63	5000	NATL 1320UE	20,000	250		Gulf of Suez	Drilling
Egyptian Drlg	EDC Rig 22	Platform	13.63	5000	EMSCO WS1B	17,000				
	4				NATL 110	13,000				
Foramer	Ile d'Amsterdam	Jackup	13.63	10000	NATL 1320DE	20,000	300	95	Port Fouad	Drilling
Global Marine Drlg	Glomar High Island II	Jackup	13.63	10000	NATL 1320UE	20,000	250	250	GS-305-1	Drilling
Interocean Drlg SA	Interocean III	Jackup	13.63	10000	NATL 1320UE	20,000	300			Drilling
Japan Drlg	Hakuryu I	Jackup	13.63	5000	NIIGATA N3000	13,500	110	103	Belayim 113-M-24 Gulf of Suez	Drilling
Ocean Drlg & Expl	Ben Ocean Typhoon	Drillship	13.63	5000	NATL 1320UE	25,000	600	600	Gulf of Suez EE-85-6A	Drilling
	Ocean Tide	Jackup	13.63	10000	NATL 1320DE	25,000	250	250	Gulf of Suez SB-249-1	Drilling
Penrod Drlg	95	Jackup	13.63	10000	NATL 1320UE	25,000	250			Drilling
Reading & Bates	E W Thornton	Drillship	20.00	5000	OILWELL E3000	25,500	600		Geisum No 6	Contracted To Mobil
	Roger W Mowell	Jackup	13.63	10000	NATL 1625DE	25,000	300		Walker 1	Contracted To AGIP
Santa Fe Drlg	Rig 105	Jackup	21.25	5000	EMSCO C2	20,000	250		Gulf of Suez	Drilling
	Santa Fe Mariner I	Semisubmersible	16.75	5000	NATL 1320UE	20,000	600		Gulf of Suez	Drilling
	136	Jackup	13.63	10000	NATL 1320UE	20,000	250			Drilling
	141	Jackup	13.63	10000	OILWELL E2000	20,000				Drilling
Sonat Offshore Drlg Inc Group	Discover 1/Rig 22	Tender	12.00	3000	NATL 80B	12,000	600			
	Discoverer II	Drillship	16.75	5000	EMSCO 3000	20,000	1500			Idle
	Offshore Aquarius	Jackup	13.63	10000	OILWELL E2000	20,000	250			Drilling
	Offshore Comet	Jackup	13.63	10000	NATL 1320UE	20,000	250			
	Offshore Taurus	Jackup	13.63	5000	M-CSCO U1220BE	20,000	250			
Western Oceanic	Western Triton I	Jackup	13.63	10000	NATL 1320UE	20,000	250		Gulf of Suez	Drilling
Western Offshore Drlg & Expl	Western Offshore V	Barge	16.75	5000	NATL 1320DE	20,000	600			Idle
GABON										
Atwood Oceanics	Shiloh	Tender	16.75	5000	NATL 1320UE	20,000	400			Operating
Foramer	Asterie	Semisubmersible	18.75	10000	GAR-DEN 2100DE	25,000	800	450	KAL 1	Drilling
	Ile d'Ouessant	Tender	10.00	5000	IDECO H525	8,000	360	220	GRM 10	Workover
	Ile de la Martinique	Tender	16.75	5000	NATL 1320DE	20,000	360	220	MBSM B6	Drilling
	Shiloh	Tender	16.75	5000	NATL 1320DE	20,000	450	205	TRM 15	Drilling
Forex Neptune and/or Affil	Neptune 7 Pentagone 81	Semisubmersible	13.63	10000	NATL 1320UE	24,000	660	660	Port Gentil	Available
	Pentagone 82	Semisubmersible	18.75	10000	EMSCO C3UE	20,000	1050	1050	Port Gentil	Available
	Searex I	Tender	16.75	5000	GAR-DEN 1100E	18,000		200	PSM Platform	Drilling
	Trident 7A	Jackup	13.63	10000	GAR-DEN 1500E	21,700	132	132		Drilling
Global Marine Drlg	Glomar Adriatic I	Jackup	13.63	10000	NATL 1625DE	25,000	300	300	Pacassa	Drilling
	Glomar Main Pass I	Jackup	13.63	10000	NATL 1625DE	25,000	300	300	Lum F	Drilling
Keydril	Key Gibraltar	Jackup	13.63	10000	OILWELL E2000	25,000	300			Drilling
Ocean Drlg & Expl	Ocean Ruler	Jackup	13.63	5000	NATL 1625EU	25,000	250	250	Port Gentil	Drilling
IVORY COAST										
Forex Neptune and/or Affil	Unifor 2	Platform	13.63	5000	EMSCO 1500E	21,700			Belier Field	Stand By
J L Offshore	Dan Duke	Jackup	13.63	10000	NATL 1320UE	20,000	300	278	Espoir Field	Production
Reading & Bates	F G McClintock	Jackup	20.00	10000	OILWELL E3000	25,000	300	120	Blk A1-1X	Contracted To AGIP
Sedco Underseas Drlg	Sedco 471	Drillship	16.75	10000	OILWELL E3000	25,000	6000	890	A-8X	Exploratory Drilling
Southeastern Drlg Serv	Sedco J	Semisubmersible	21.25	2000	OILWELL E3000	25,000	800	461	B1-5X	Exploratory
LIBYA										
Saipem	Scarabeo 3	Semisubmersible	18.75	10000	NATL 1625	25,000	1300	1183	AIA-NC87	Working
Sedco Inc	Sedco H	Semisubmersible	18.75	10000	OILWELL 3000	25,000	800			Under Tow To Libya
MOROCCO										
Santa Fe Drlg	Mariner 2	Semisubmersible	16.75	5000	NATL 1320UE	20,000	600			Drilling
NIGERIA										
Atwood Oceanics	Richmond	Submersible	20.00	2000	NATL 1320UE	20,000	70	18	Beniboye	Drilling
Diamond M	Barge 44	Barge-Posted	13.63	5000	OILWELL E3000	25,000	18	15		Drilling
	Barge 45	Barge-Posted	13.63	10000	OILWELL E3000	25,000	18	15		Drilling
Dixilyn-Field Drlg	83	Jackup	13.63	10000	NATL 1320UE	20,000	250	225	Asasa-West-A	Drilling
Forex Neptune and/or Affil	Belle Isle	Barge	13.63	5000	EMSCO 1500UE	21,700		22	Niger Delta	Drilling
	Lutece	Barge	13.63	5000	IDECO 2500E	25,400		22	Niger Delta	Drilling
	Neptune 1	Jackup	13.63	5000	NATL 1625DE	24,000	257			Drilling
	Trident IV-A	Jackup	13.63	10000	GAR-DEN 2100E	25,400	300	300	Bonny River	Available
	Trident 8	Jackup	13.63	10000	GAR-DEN 1500E	21,700	300	200		Drilling
Keydril	Key Bermuda	Jackup	13.63	10000	OILWELL 2000	20,000	200			Drilling
	Key Largo	Jackup	13.63	10000	OILWELL E300	25,000	300			Drilling

Contractor	Rig name or no.	Type	BOP Stack		Drwwks make & model	Rated drlg depth with 4½ in. pipe	Water Depth		Location	Status
			Size (ID)	Pressure rating			Rated	Current		
AFRICA (Cont'd)										
NIGERIA (Cont'd)										
Reading & Bates	Douglas Carver	Drillship	20.00	10000	NATL 1625DE	25,000	750		AGBARA-13	Contracted To AGIP
Santa Fe Drlg	Swamp Chief R-86	Barge	13.63	5000	NATL 110UE	16,000	22			Drilling
	Swamp Master R-83	Barge	20.00	5000	IDECO 2500E	20,000	22			Idle
	Swamp Queen R-84	Barge	20.00	5000	NATL 1320	20,000	22			Idle
Sedco Inc	Sedco 252	Jackup	13.63	10000	OILWELL E2000	20,000	250		N Apoi 22	Drilling
	Sedco 253	Jackup	13.63	10000	EMSCO C2	20,000	250		Funiwa B3	Drilling
	Sedneth I	Semisubmersible	16.75	5000	OILWELL E3000	25,000	600		Okpoho B	Drilling
Transworld Drlg	46	Submersible	13.63	5000	EMSCO EDA460	20,000	70	30	Okan	Drilling
Western Offshore Drlg & Expl	Mr Sage	Jackup	13.63	5000	NATL 1320UE	20,000	200	65	Akan #4	Drilling
SENEGAL										
Santa Fe Drlg	Calabar Queen Rig 83	Tender	20.00	5000	IDECO E1200	12,000		100		Idle
SOMALIA										
Sonat Offshore Drlg Inc Group	Discoverer 511	Drillship	18.75	10000	IDECO E2100	20,000	2000			Drilling
SOUTH AFRICA										
Sedco Maritime	Sedco K	Semisubmersible	21.25	10000	OILWELL E3000	25,000	900	343	Soekor E-R1	Drilling
Western Oceanic	Nike I	Jackup	13.63	10000	NATL 1320	20,000	150			Under Construction
SUDAN										
Forex Neptune and/or Affil	Trident 6	Jackup	13.63	10000	GAR-DEN 1500E	21,700	300	200		Drilling
TUNISIA										
Ocean Drlg & Expl	Ocean Voyager	Semisubmersible	13.63	5000	EMSCO C3 Type 2	25,000	1200	1200	Kerkevane No 1	Drilling
Penrod Drlg	70	Semisubmersible	13.63	10000	NATL 1625DE	30,000		600		Drilling
AUSTRALIA										
AUSTRALIA										
Atwood Oceanics	Energy Searcher	Drillship	18.75	10000	GAR-DEN 3000E	25,000	1500	269	Palk St	Drilling
	Regional Endeavour	Drillship	18.75	10000	NATL 1320UE	20,000	1500	482	Carnavon Basin	Drilling
Diamond M	Epoch	Semisubmersible	16.75	10000	OILWELL E3000	30,000	1200		Bass Strait	Just Arrived On Location
Global Marine Drlg	Glomar Grand Isle	Drillship	18.75	10000	NATL 1625 DE	25,000	600	600		Drilling
	Glomar Main Pass III	Jackup	13.63	10000	NATL 1625DE	25,000	300			In Route
Keydril	Key Biscayne	Jackup	13.63	5000	NATL 1320UE	20,000	250			Drilling
Loffland Bros	95	Platform	13.63	5000	M-CSCO U1220	20,000			Snapper	Drilling
Maersk Drlg	Maersk Valiant								Bambra 1	Drilling
Ocean Drlg & Expl	Ocean Digger	Semisubmersible	18.75	10000	EMSCO A1500	25,000	600	600	Edina No 1	Drilling
	Ocean Prospector	Semisubmersible	18.75	10000	EMSCO C3 Type 2	25,000	1000	1000	North Gorgon No 1	Drilling
Pool Australia	Rig 110-Offshore	Platform			Ingersoll-Rand 2042	7,500				Stacked
Richter Drlg Pty	12	Platform	13.63	5000	NATL 110UE	16,000				Drilling
	3				NATL T32	5,500				
South Seas Drlg	Southern Cross	Semisubmersible	18.75	10000	OILWELL E2000	20,000	1500		Bass Strait	Drilling
CANADA										
UNDESIGNATED										
Canadian Marine Drlg	Canmar Explorer I	Drillship	18.75	10000	IDECO 2100E	25,000	600		Kiggavik	Shut Down
	Canmar Explorer II	Drillship	18.75	10000	IDECO 2100E	25,000	600		Aiverk	Shutdown
	Canmar Explorer III	Drillship	18.75	10000	NATL 1625DE	25,000	1500		Orvilruk 0-03	Shutdown
	Canmar Explorer IV	Drillship	18.75	10000	EMSCO C3	20,000	607	193	Kenalooak J-94	Testing
Global Marine Drlg	Glomar High Island IX	Jackup	13.63	10000	NATL 1320	20,000	250			Under Construction
	Glomar High Island VIII	Jackup	13.63	10000	NATL 1320UE	20,000	250			Under Construction
	Glomar High Island X	Jackup	13.63	10000	NATL 1320UE	20,000	250			Under Construction
Sonat Offshore Drlg Inc Group	John Shaw	Semisubmersible	18.75	10000	EMSCO C3 Type II	25,000	1500			Enroute
BEAUFORT SEA										
Canadian Marine Drlg	SSDC	Barge	13.63	10000	NATL 1625DE	25,000	26		Uviluj	Driving 40"
GRAND BANKS										
Sedco Maritime	Sedco 706	Semisubmersible	18.75	10000	OILWELL E3000	25,000	1300	277	Linnett E-63	Drilling
NEWFOUNDLAND										
Smedvig Drlg	West Venture	Semisubmersible	18.75	10000	EMSCO 3C	30,000	1200	800	Hibernia 1-46	En Route
Zapata Offshore	Zapata Ugland	Semisubmersible	13.63	10000	OILWELL E3000	25,000	600	519	Grand Banks	Drilling
NORTHWEST TERRITORIES										
Canadian Marine Drlg	CBIR #1	Semisubmersible	20.75	3000	EMSCO C3	25,000	26			Stacked
NOVA SCOTIA										
Marine Drlg SA	Sedco 709	Semisubmersible	16.75	10000	OILWELL E3000	25,000	6000	4000		Exploratory
Rowan Co	Rowan Juneaue	Jackup	13.63	15000	NATL 1625	25,000	300	67	Sable Island	Drilling
Zapata Offshore	31	Jackup	13.63	15000	NATL 1625DE	25,000	200		Sable Island	Drilling
PORT COLBORNE										
Underwater Gas Dev	Mr Neil	Jackup	10.00	3000	IDECO H525D	8,000	80			Stacked
	Telesis	Drillship	8.00	2000	NATL T20	5,000	210			Stacked
	Timesaver II	Jackup	8.00	2000	EMSCO GB250	5,000	100			Stacked
EUROPE										
UNDESIGNATED										
Canadian Marine Drlg	CBIR #2	Semisubmersible	20.75	3000	NATL 1625DE		26			For North Sea Drlg
Dixilyn-Field Drlg	DF-87	Jackup	13.63	10000	NATL 1320UE	25,000	300	300	Dutch Sector-North Sea	Drilling
Dyvi Offshore	Dyvi Stena	Semisubmersible	18.75	10000		25,000	1500			Under Construction
	TDN	Semisubmersible	18.75	10000		25,000	1500			
Global Marine Drlg	Glomar Biscay I	Semisubmersible	18.75	10000	OILWELL E3000	25,000	1500			In Port
Santa Fe Drlg	Britannia R-65	Jackup	20.00	10000	NATL 1320DE	20,000	160	140	North Sea	Drilling
Wilh Wilhelmsen	Treasure Saga	Semisubmersible								Awaiting Delivery

Contractor	Rig name or no.	Type	BOP Stack Size (ID)	BOP Stack Pressure rating	Drwwks make & model	Rated drlg depth with 4½ in. pipe	Water Depth Rated	Water Depth Current	Location	Status
EUROPE (Cont'd)										
BELGIUM										
Foramer (Offshore Europe)	Patrel		16.75	10000	NATL 1625DE	25,000	2000			Standby
DENMARK										
Dyvi Drlg A/S	J/U Dyvi Beta (Trigone 1)	Jackup	13.63	10000	NATL 1320UE	25,000	350	216	Blk Mona 1	Drilling
Dyvi Offshore	Dyvi Epsilon CJ-46-1	Jackup	13.63	10000	NATL 1320UE	25,000	210	133	Blk Thor-1	Drilling
J L Offshore	Dan Earl	Jackup	13.63	10000	NATL 1320UE	20,000	205	130	Tyra Field	Drilling
Maersk Drlg	Maersk Endeavour								North Sea TWB 3	Drilling
	Maersk Explorer	Jackup	13.63	10000	NATL 1320UE	25,000			North Sea Emma 1	Logging
FINLAND										
Global Marine Drlg	Glomar Arctic I	Semisubmersible	18.75	15000	OILWELL E3000	25,000	1800	1800		Under Construction
	Glomar Arctic II	Semisubmersible	18.75	15000	OILWELL E3000	25,000	1800	1800		Under Construction
	Glomar Arctic III	Semisubmersible	18.75	15000	OILWELL E3000	25,000	1800	1800		Under Construction
FRANCE										
Foramer	Barracuda	Tender	16.75	5000	NATL 1320DE	20,000	400			Delivery 7/82
Global Marine Drlg	Glomar Labrador I	CFEMT2005	13.63	15000	NATL 1625DE	25,000	300			Under Construction
	Glomar Moray Firth I	T2600	13.63	15000	NATL 1625DE	25,000	300			Under Construction
GREECE										
J L Offshore	Dan Baron	Drillship	18.75	10000	IDECO E3000	20,000	1000		Pireaus Roads	Available
Penrod Drlg	58	Jackup	13.63	10000	NATL 1625DE	30,000	210		N Aegean Sea Pfm Beta of Alpha	Drilling
Western Offshore Drlg & Expl	Western Offshore III	Barge	13.63	10000	NATL 1320DE	20,000	600	170	Athos #1	Drilling
ITALY										
Chiles Drlg	Texas Star	Jackup	13.63	10000	NATL 110UE	16,000	150		Port of Palermo	Stacked
Foramer	Pelican	Drillship	13.63	10000	NATL 1625DE	25,000	1100		Bonnaccia II	Drilling
Maersk Drlg	Maersk Endurer	Jackup	13.63	10000	OILWELL E2000	20,000	250			Stacked in Trieste
	Maersk Viking								Aura 1	Drilling
Pool-Intairdril	446	Platform	13.63	5000	OIME 1000	10,000			Adriatic Sea	Standby-AGIP
	447	Platform			OIME 1000				Adriatic Sea	Working-ELF
Reading & Bates	Mr Jack	Jackup	20.00	10000	OILWELL E3000	25,000	300	105	Sicily Loredana 1	Contracted To AGIP
Saipem	Perro Negro	Jackup	13.63	10000	IDECO PE2500	21,000	130	79	Azalea 2	Working
	Perro Negro 3	Jackup	13.58	10000	OILWELL E2000	21,000	300			Under Construction
	Saipem Due	Drillship	16.75	5000	NATL 1625	25,000	1000	138	Santuzza 1	
	Scarabeo II	Semisubmersible	18.75	10000	IDECO PE2500	21,000	600	344		Maintenance
	Scarabeo 4	Semisubmersible	18.75	10000	NATL 1625	25,000	1300	338	Margherita	Working
	53	Platform	13.63	5000	IDECO H525D	7,000				Stacked
	90	Platform	13.58	10000	IDECO E2100	25,000		85	P Corsini 80	Working
Sonat Offshore Drlg Inc Group	Discover Seven Seas	Drillship	16.75	10000	EMSCO C3 Type II	25,000	6000			Drilling
MALTA										
Pacnorse Drlg	Pacnorse I	Drillship	18.75	10000	EMSCO C3 Type II	30,000	5000			Drydock
NETHERLANDS										
Deutsche Tiefbohr	T-38 D	Mobile	11.00	10000	DEUTAG/Wilson 75	13,000/3-1/2"				Workover
Global Marine Drlg	Glomar Adriatic III	Jackup	13.63	10000	NATL 1625DE	25,000	300	300	NED-P-12 #31 (North Sea)	Drilling
J L Offshore	Dan King	Jackup	13.63	10000	NATL 1320UE	20,000	205	110	Blk K-17	Drilling
Penrod Drlg	64	Jackup	13.63	10000	NATL 1625DE	30,000	210			Drilling
	67	Jackup	13.63	10000	NATL 1625DE	30,000	210			Drilling
	80	Jackup	13.63	10000	NATL UE	30,000	210			Drilling
	81	Jackup	13.63	10000	NATL 1320UE	25,000	210			Drilling
Rowan Intl	Gilbert Rowe	Jackup	13.63	10000	NATL 1625	25,000	300		P-2-5	Drilling
Transocean Drlg	Transocean No 1	Jackup	11.00	10000	EMSCO A1500E	20,000	140	100	Q/7 4	Drilling
	Transocean No 2	Jackup	13.63	10000	NATL 1625DE	20,000	150	90	Helder A-5	Drilling
	Transocean No 4	Jackup	13.63	10000	NATL 1320UE	25,000	160	100	K/8-10	Drilling
	Transocean No 6	Jackup	13.63	10000	EMSCO C3 Type 2	20,000	300	110	K/13C-F5	Drilling
Western Oceanic	Western Triton IV	Jackup	13.63	10000	EMSCO C2	20,000	250		Saba Bank-North Sea	Drilling
Zapata Offshore	Zapata Nordic	Jackup	13.63	10000	EMSCO C3 Type II	20,000	300	154	Dutch Sea-North Sector	Drilling
NORWAY										
Dyvi Drlg A/S	D/R Dyvi Alpha	Semisubmersible	18.75	10000	NATL 1625DE	25,000	1300	800	Blk 34-4	Drilling
Dyvi Offshore	Dyvi Delta	Semisubmersible	13.63	15000	OILWELL	25,000	3000	1500	Blk 6407/1-2	Drilling
Global Marine Drlg	Glomar Biscay II	Semisubmersible	18.75	10000	NATL 1625DE	25,000	600	600	Sleipner 16/7-3	Drilling
Golar-Nor Offshore A/S	Nortrym	Semisubmersible	18.75	10000	NATL 1625DE	20,000	1000		North Sea 30/6	Testing
Intl Chandlers	Sedco PSSI	Semisubmersible					1500	300	Ekofisk Field	Support Services
Loffland Bros	51	Platform	13.63	5000	M-CSCO U1220EB	20,000		467	Statfjord-North Sea	Drilling
Morco A/S	1/6 A	Platform	13.63	10000	NATL 1320UE				Albuskjell Field	Drilling/Workover
	2/4 Alpha	Platform	13.63	5000	EMSCO A1500E				Ekofisk Field	Drilling/Workover
	2/4 Bravo	Platform	13.63	5000	EMSCO A1500E				Ekofisk Field	Workover/Drilling
	2/4 C	Platform	13.63	5000	OILWELL 940E				Ekofisk Field	Workover/Drilling
	2/4 Delta	Platform	13.63	5000	EMSCO C2				West Ekofisk Field	Workover/Drilling
	2/4 E	Platform	13.63	5000	EMSCO C3				Tor Field	Workover/Drilling
	2/4 F	Platform	13.63	10000	NATL 1320UE				Albuskjell Field	Workover/Drilling
	2/7 A-10	Platform	16.75	5000	OILWELL 940E				Eldfisk Field	Workover/Drilling
	2/7 A-32	Platform	16.75	5000	NATL 110UE				Eldfisk Field	Workover/Drilling
	2/7 Bravo	Platform	13.63	5000	M-CSCO U1220EB				Eldfisk Field	Workover/Drilling
	2/7 C	Platform	13.63	5000	M-CSCO U1220B				Edda Field	Workover/Drilling
	7/11-A	Platform	13.63	5000	IDECO E2100				COD Field	Workover/Drilling
Odfjell Drlg & Consulting	Deepsea Bergen	Semisubmersible	18.75	10000	NATL 1625DE	25,000	1500			Outfitting
	Deepsea Saga H-3	Semisubmersible	18.75	10000	NATL 1625DE	25,000		1250		Yard
	101 Statfjord "B"	Semisubmersible	13.63	5000	NATL 1320UE	25,000	1750		33/12-B23 North Sea	Drilling
Ross Drlg	Koldnes No 219 Ross Isle	Bingo 3000	18.75	10000	OILWELL E3000	25,000	1500		Tonsberg	Delivery Mid-Feb 83
	Neptuno Nordraug	Aker H3	18.75	10000	NATL 1625DE	25,000	1000	900	34/10	Drilling
	Ross Rig	Aker H3	18.75	10000	NATL 1625DE	25,000	1250	597	Sandefjord	Upgrading & Special Survey
Smedvig Drlg	TBN-Bingo-300 West Vanguard	Semisubmersible	18.75	10000	EMSCO 3000	25,000	1500		North Sea Well 15-9-17	Drilling

			BOP Stack				Water Depth			
Contractor	Rig name or no.	Type	Size (ID)	Pressure rating	Drwwks make & model	Rated drlg depth with 4½ in. pipe	Rated	Current	Location	Status
EUROPE (Cont'd)										
NORWAY (Cont'd)										
Southeastern Drlg Serv	Sedco 703	Semisubmersible	18.75	10000	OILWELL 3000	25,000	2000	236	1/9-6	Production Testing
	Sedco 707	Semisubmersible	21.25	2000	OILWELL E3000	25,000	2000	420	650F/10-1	
Stavanger Drlg A/S	Henrik Ibsen	Semisubmersible	18.75	10000	GAR-DEN 3000E	30,000	1200			Stacked
	89 Pentagone	Semisubmersible	18.75	10000	GAR-DEN 3000E	30,000	1200			Stacked
Wilh Wilhelmsen	Treasure Scout	Semisubmersible					2500	840	Blk 30/6-North Sea	Drilling
	Treasure Seeker SS H-3	Semisubmersible		15000	EMSCO C3 Type 2	25,000	1250	1250	Blk 30/9-1-North Sea	
	Treasure Swan	Semisubmersible					2500	810	Blk 29/14-North Sea	Drilling
PORTUGAL										
Sedco Inc	Sedco 472	Drillship	16.75	10000	OILWELL E3000	25,000	6000		Lisbon	Stacked
SCOTLAND										
Loffland Bros	43	Platform	13.63	10000	IDECO E3000	20,000			Brent Charlie	Working
	81	Platform	13.63	5000	M-CSCO U1220EB	20,000		450	Ninian Central	Drilling
	82	Platform	13.63	5000	M-CSCO U1220EB	20,000		450	Ninian Central	Drilling
	83	Platform	13.63	5000	M-CSCO U1220EB	20,000			Ninian South	Drilling
	84	Platform	13.63	5000	M-CSCO U1220EB	20,000			Ninian South	Drilling
Transworld Drlg	58	Semisubmersible			EMSCO C3000	25,000	600	300	Argyll	Production Mode
SICILY										
Global Marine Drlg	Glomar Grand Banks	Drillship	18.75	10000	NATL 1625DE	25,000	600	600	Vega #3	Drilling
SPAIN										
Dolphin Titan Intl	131	Platform	13.63	10000	EMSCO C2	25,000			Casablanca Field	Drilling
KCA Drlg	MV Polly Bristol	Drillship	18.75	10000	NATL 1625DE	25,000	4500	1500	Gulf of Cadiz	Drilling
Ocean Drlg & Expl	Ocean Endeavour	Semisubmersible	18.75	10000	EMSCO C3 Type 2	25,000	1000	1000	Vizcaya C-2	Drilling
Sedco Inc	Sedco I	Semisubmersible	16.75	5000	OILWELL E3000	25,000	1000	309	Dorado Field	Production
Western Oceanic	Western Pacesetter I	Semisubmersible	18.75		NATL 1625DE	25,000	600		H-2X	Drilling
UNITED KINGDOM										
Atlantic Drlg	Bendoran Aker H-3	Semisubmersible	21.25	2000	NATL 1625DE	25,000	850	364	UK Blk 20/2-2	Contract To Britoil To Fall 84
	Benurackie	Semisubmersible	21.25	2000	NATL 1625DE	25,000	850	497	UK Blk 3/11B-4	Contract To Chevron To Mid 84
Bawden Drlg (UK)	32	Platform W/O	10.00	3000	OILWELL 700	9,000			Beatrice-North Sea	Working Over Wells
	34	Platform	13.63	5000	NATL 1320UE	22,000			Piper-North Sea	Drilling
	35	Platform	16.63	5000	NATL 1320UE	20,000			Beatrice-North Sea	Drilling
	39	Platform	13.63	5000	NATL 1320UE	22,000			Ninian North-North Sea	Drilling
	40	Platform	13.63	5000	NATL 1320UE	20,000			Claymore-North Sea	Drilling
	41	Platform	13.63	5000	NATL 1320UE	20,000			Claymore-North Sea	Drilling
	42	Platform	13.63	5000	NATL 1320UE	22,000/5"			Murchison-North Sea	Drilling
Deutsche Tiefbohr	T-20	Platform	13.63	10000	NATL 1320UE	18,000	460	460	UK Blk 211/20	Drilling
	T-21	Platform	13.63	10000	NATL 1320UE	18,000	460	460	UK Blk 211/29	Drilling
	T-25	Platform	13.63	10000	NATL 1320UE	18,000	510	510	UK Blk 211/23	Drilling
Dixilyn-Field Drlg	96	Semisubmersible	18.75	10000	NATL 1625	25,000	1200	1200	North Sea	Drilling
	97	Semisubmersible	18.75	10000	EMSCO C1112	25,000	1200		Blk 9-11-3	Drilling
Forex Neptune and/or Affil	Drill Star	Semisubmersible	18.75	15000	NATL 1625DE	25,000	1500	1500	North Sea 21/30	Drilling
	Pentagone 84	Semisubmersible	13.63	10000	GAR-DEN 3000E	24,000	660	660	North Sea	Assistance MCP01 Platform
Houlder Marine Drlg	Shelf Driller	Jackup	13.63	10000	NATL 1625E	25,000/5"		300	Moray Firth	Drilling
Keydril	Galveston Key	Jackup	13.63	10000	EMSCO C3	25,000	300			Drilling
Kingsworth Marine Drlg	Dundee Kingsworth Aker H-3	Semisubmersible	18.75	10000	NATL 1625DE	24,000		1000	Mutton Field	Drilling Production
	Kingsworth UK Aker H-3	Semisubmersible	18.75	10000	NATL 1625DE	24,000		1250		Moving To Location
KCA Drlg	51	Platform	13.63		NATL 1320UE	20,000			Beryl Alpha Platform-Blk 9/13	Workover
	52	Platform	13.63	5000	NATL 1320UE	20,000			Beryl Alpha Platform-Blk 9/13	Workover
Ocean Drlg & Expl	Ocean Bounty	Semisubmersible	16.75	10000	EMSCO C3 Type 2	25,000	1200	1200	13/28-3	Drilling
	Ocean Kokuei	Semisubmersible	13.63	10000	EMSCO C3 Type 2	25,000	600	600	15/16-15	Drilling
	Ocean Liberator	Semisubmersible	18.75	10000	NATL 1625DE	25,000	1000	1000	North Sea 9/13-B5	Drilling
	Ocean Victory	Semisubmersible	13.63	10000	EMSCO C3 Type 2	25,000	600	600	North Sea 15/16-16	Drilling
Odfjell Drlg & Consulting	STC Cicero	Jackup	13.63	1000	NATL 1620DE	25,000	285		North Sea Sole Pit 48	Drilling
Penrod Drlg	85	Jackup	13.63	10000	NATL 1320UE	25,000	250		Great Yarmouth	Drilling
Rowan Intl	Arch Rowan	Jackup	13.63	10000	NATL 1625	25,000	300		West Sole 48/6	Drilling
	Cecil Provine	Jackup	13.63	10000	NATL 1625	25,000	300			Available
	Charles Rowan	Jackup	13.63	10000	NATL 1625	25,000	300	5	Leman Bank	Drilling
Santa Fe Drlg	Rig 111/112 Thistle	Platform	21.75	5000	OILWELL 3000E	20,000			North Sea-Thistle Field	Drilling
	82	Platform	20.00	5000	NATL 1320UE	20,000			Auk Field	Drilling
Sea Drlg Netherlands	Sednath 701	Semisubmersible	21.25	10000	OILWELL E3000	25,000	1500	326	North Sea Blk 16	Template Completion
Sedco Inc	Sedco/BP-711	Semisubmersible	13.63	15000	OILWELL E3000	25,000	1500			Under Way From Korea
Sonat Offshore Drlg Inc Group	Chris Chenery	Semisubmersible	13.63	10000	NATL 1625DE	25,000	600			Drilling
Southeastern Drlg Serv	Sedco 700	Semisubmersible	21.25	10000	OILWELL E3000	25,000	1500	400	21/25-3	Drilling Exploration
	Sedco 704	Semisubmersible	18.75	10000	OILWELL 3000	25,000	1500	1250	North Sea 21/4-1	Drilling Exploration

			BOP Stack		Drwwks make & model	Rated drlg depth with 4½ in. pipe	Water Depth			
Contractor	Rig name or no.	Type	Size (ID)	Pressure rating			Rated	Current	Location	Status
					EUROPE (Cont'd)					
UNITED KINGDOM (Cont'd)										
Western Oceanic	Apollo II	Jackup	13.58	10000	EMSCO C3	20,000	300		Irish Sea-Morcambre Bay	Drilling
	Western Pacesetter II	Semisubmersible	18.75	10000	NATL 1625DE	25,000	1200		9/8-7-North Sea	Drilling
	Western Pacesetter III	Semisubmersible	18.75	10000	EMSCO C3II	25,000	1200		21-12-North Sea	Drilling
WEST GERMANY										
Deutsche Tiefbohr	T-24		13.63	10000	NATL 80BUE	13,000				Available
Dyvi Offshore	Dyvi Sigma CJ-46-2	Jackup	13.63	10000	NATL 1320UE	25,000	210	111	Blk H-18-1	Drilling
					MEXICO					
CAMPECHE										
Perforaciones Alta Mar CA	Rig III	Tender			NATL 130	20,000			Bay of Campeche	Drilling
Perforadora Mexico S/A	D/B Reforma	Drillship	18.75		NATL 1625DE	25,000	600	228	Bay of Campeche	Drilling
	D/B Revolucion	Drillship	18.75	10000	NATL 1625DE	25,000	600	150	Bay of Campeche	Drilling
	Reforma	Drillship	18.75	10000	NATL 1625DE	25,000	600	228	Bay of Campeche	Drilling
	Revolucion	Drillship	18.75	10000	NATL 1625DE	25,000	600	150	Bay of Campeche	Drilling
Rowan Co	Rowan Louisiana	Jackup	13.63	10000	NATL 1625DE		300	220	Bay of Campeche	Drilling
	Rowan-Texas	Jackup	13.63	10000	NATL 1320UE	25,000	225	225	Bay of Campeche	Drilling
					MIDDLE EAST					
UNDESIGNATED										
Penrod Drlg	56	Jackup	13.63	10000	NATL 1625DE	30,000	150			Stacked
	57	Jackup	13.63	10000	NATL 1625DE	30,000	150			Stacked
ABU DHABI										
Foramer	Ile de France	Jackup	13.63	5000	NATL 1625DE	25,000	200	95	US 102	Drilling
	Ile du Levant	Jackup	13.63	5000	NATL 1320DE	20,000	150	110	ZL 203	Drilling
Foramer (Interdrill)	Tourmalines	Jackup	10.00	5000	NATL 80B	12,000	100	95	UZ 30	Workover
Forex Neptune and/or Affil	Trident 5	Jackup	10.00	5000	IDECO E900	12,000	150	150		Workover
	Trident-III	Jackup	13.63	5000	GAR-DEN 2100E	25,400	300	100		Drilling
Japan Drlg	Hakuryu VI	Jackup	13.63	5000	NATL 1320UE	20,000	180	53	Zakum ZK-122	Drilling
	Hakuryu VII	Jackup	13.63	10000	NATL 1320UE	20,000	150		UA-11	Work Over
Loffland Bros	Ocean Master IV/Rig 160	Jackup	13.66	3000	M-CSCO U914	18,000	110		Bunduq	Working
Maersk Drlg	Maersk Victory								AK 52	Drilling
National Drlg	Al Ghallan	Jackup	13.63	5000	NATL 1320UE	2,000	150	125	Zakum Field	Drilling
	Al Ittihad	Jackup	13.63	5000	NATL 1320UE	20,000	150	125	Hair Dalme	Drilling
	Al Yasat	Jackup	13.63	5000	NATL 1320UE	20,000	150	125	Zakum Field	Drilling
	Diyina	Jackup	13.63	5000	NATL 1320UE	20,000	150	125	Zakum Field	Drilling
	Junana	Jackup	13.63	10000	NATL 1320UE	20,000	150	125	Zakum Field	Drilling
Transworld Drlg	63	Jackup	13.63	5000	EMSCO C3 Type II	25,000	250	130		Drilling
Zapata Offshore	Chaparral	Jackup	13.63	10000	OILWELL 3000E	25,000	240	53	Zakum	Drilling
	Heron	Jackup	13.63	10000	NATL 1625DE	25,000	300	41	Zakum	Drilling
	Topper II	Jackup	13.63	5000	NATL 110UE	16,500	115	25	Arzanah	Drilling
	33	Jackup	13.63	10000	NATL 1320	20,000	250		Umm Shaif	Drilling
DUBAI										
Atwood Oceanics	Bull Run	Tender	13.63	5000	NATL 1320UE	20,000	400		Persian Gulf	Rigging up
	Williamsburg	Platform Tender	13.63	10000	EMSCO C	20,000	500	174	Persian Gulf-Fateh Fld Well U5	Drilling
Transocean Drlg	Transocean No 5	Jackup	13.63	10000	NATL 1625	25,000	300	150	Zeta	Drilling
IRAN										
Scan Drlg	Scan Bay	Jackup	13.63	10000	OILWELL E3000	25,000	250	250	Persian Gulf	Drilling
OMAN										
Forex Neptune and/or Affil	Trident IX	Jackup	13.63	10000	GAR-DEN 1500E	21,700	400			Drilling
QATAR										
Forex Neptune and/or Affil	Trident II	Jackup	13.63	10000	GAR-DEN 2100RE	25,400	350	300		Drilling
Santa Fe Drlg	Rig 103	Jackup	20.00	5000	EMSCO C2	20,000	250			Drilling
RAS AL KHAIMAH										
Western Offshore Drlg & Expl	Western Offshore VIII	Drillship	16.75	5000	NATL 1625DE	25,000	600	320	Saleh #1-X	Drilling
SAUDI ARABIA										
Arabian Drlg	Arabdrill 2	Tender			NATL 110	19,000		200	Khafji	Drilling
	AD 8	Jackup	13.63	5000	NATL 110UE	19,000	150	150	Berri Field	Drilling
Loffland Bros	Oceanmaster III-R-150	Jackup	13.66	3000	M-CSCO U712A	14,000	160		Manifa	Working
	Orville Fisher/Rig 183	Platform	13.63	5000	M-CSCO U914C	18,000			Safaniyah	Working
Maersk Drlg	Maersk Venturer								Marjan 52	Drilling
	Maersk Voyager								Zuluf 93	Drilling
Pool Arabia	142-Offshore	Jackup	13.63	5000	NATL 80B	12,000	150		Arabian Gulf	Working
	143	Jackup	10.00	5000	OIME 1000	12,500	160	120	Arabian Gulf	Working
	144	Jackup	13.63	5000	OIME 1000E	10,000	160		Arabian Gulf	Working
	145	Jackup	13.63	5000	IDECO ED1200	13,000	160			Under Construction
Reading & Bates	Ron Tappmeyer	Jackup	13.63	10000	OILWELL E3000	20,000	300		Abu Safah #29	Contracted to Aramco
Rowan Intl	Rowan Anchorage	Jackup	13.63	5000	NATL 1320UE	25,000	225		Maharah II 12	Drilling
	Rowan-New Orleans	Jackup	13.63	5000	NATL 1324UE	25,000	225	225	Lohah #17	Drilling
Sonat Offshore Drlg Inc Group	Jubilee	Jackup	13.63	5000	EMSCO A1500E	20,000	200			
	North Star	Jackup	13.63	5000	NATL 1320DE	20,000	250			
	Offshore Bahram	Jackup	13.63	5000	IDECO ED1200	12,000	200			

Contractor	Rig name or no.	Type	BOP Stack		Drwwks make & model	Rated drlg depth with 4½ in. pipe	Water Depth		Location	Status
			Size (ID)	Pressure rating			Rated	Current		
MIDDLE EAST (Cont'd)										
UAE										
Dolphin Titan Intl	140	Tender/Jackup	13.63	10000	NATL 1320UE	20,000	225		Sharjah	Available
Sedco Dubai	Sedco 160	Jackup	13.63	10000	EMSCO C2	25,000	160	100	Abu Dhabi	Drilling-ADOC
	Sedneth II	Jackup	13.63	10000	OILWELL 3000E	25,000	200	100	Abu Dhabi	Drilling-ADMA
	Sedneth 201	Jackup	13.63	10000	EMSCO C2	25,000	200	100	Abu Dhabi	Drilling-ADMA
	Sedneth 202	Jackup	13.63	10000	EMSCO C2	25,000	200	100	Abu Dhabi	Drilling-ADMA
	75	Jackup	13.63	5000	OILWELL 96	16,000	100	80	Abu Dhabi	Drilling-Amenda Hess
Sonat Offshore Drlg Inc Group	Enterprise	Jackup	18.63	2000	NATL 130					Maintenance Barge
	Hustler	Jackup	12.00	5000	EMSCO A550	10,000	90			
	Offshore Antares	Jackup	10.00	5000	NATL 130	12,000	115			
	Offshore Jupiter	Jackup	13.63	5000	EMSCO C1 Type II	16,000	130			
	Offshore Mercury	Jackup	13.63	10000	NATL 1320DE	20,000	250			Enroute
	Rig 54	Jackup	13.63	5000	NATL 130E	20,000	150			
SOUTH AMERICA										
ARGENTINA										
Reading & Bates	George H Galloway	Jackup	13.63	10000	NATL 1625DE	25,000	300			U/C-Available For Contract
	W B Tyson	Jackup	13.63	10000	NATL 1625DE	25,000	300			U/C-Contracted To WEPCO-Egypt
Rio Colorado S A	Rio Colorado 1	Jackup	13.63	5000	NATL P160	20,000	300	100	Rio Grande	Drilling
BRAZIL										
Diamond M	Diamond M Hunter	Semisubmerisble	18.75	10000	OILWELL E3000	30,000	1500		Fortaleza	Drilling
	Gem	Jackup	13.63	5000	OILWELL E3000	30,000	300		Salvador	Drilling
Dolphin Titan Intl	141	Tender/Platform	13.63	5000	M-CSCO U1220EB	25,000	300		Xarev	Drilling
	142	Platform	13.63	10000	EMSCO A1500	20,000	230		Urbana	Drilling
Forex Neptune and/or Affil	Neptune Gascogne	Jackup	13.63	10000	NATL 1625UE	25,000	290	290	Espirito Santo	Drilling
Global Marine Drlg	Glomar High Island V	Jackup	13.63	10000	NATL 1320UE	20,000	250	250	Belem-Para	Drilling
Griffin-Alexander Drlg	G-A IV	Jackup	13.63	10000	UNIT EB1220	25,000	200		I SES 70	Drilling-Petrobras
Interocean Drlg SA	Interocean Discoverer	Drillship	18.75	10000	EMSCO C2 Type II	25,000	1500			Drilling
	Interocean II	Jackup	13.63	10000	EMSCO C2	20,000	300			Idle
Keydril	Key West	Jackup	13.63	10000	EMSCO C3	25,000	350			Drilling
Maersk Drlg	Maersk Pioneer SS	Semisubmersible	18.75	10000	EMSCO C2 Type II	20,000			1-RJS-236-B	Drilling
Marlin Drlg	Marlin No 7	Semisubmersible	13.63	10000	NATL 1625DE	30,000	1000	114	Campos Enchova	Workover
	Marlin 14	Jackup	13.63	1000	NATL 1625DE	25,000	150	14		Drilling
Ocean Drlg & Expl	Ocean Cyclone	Drillship	16.75	5000	NATL 1625	25,000	600	600	1-SPS-23	Drilling
	Ocean Zephyr	Semisubmersible	21.25	10000	EMSCO 3CT2	25,000	600	600	1-RJS-239	Drilling
	Zephyr II	Semisubmersible	21.25	10000	EMSCO C3T2	25,000	600	600	1-RJS-139A	Drilling
Penrod Drlg	59	Jackup	13.63	10000	NATL 1625DE	30,000	220	95		Drilling
	62	Jackup	13.63	10000	NATL 1625DE	30,000	330	308		Drilling
	71	Semisubmersible	13.63	10000	NATL 1625	30,000	1000	970		Drilling
	72	Semisubmersible	13.63	10000	NATL 1625DE	30,000	300	393		Drilling
	74	Semisubmersible	13.63	10000	NATL 1625DE	30,000	1700			Undesignated
	75	Semisubmersible	13.63	10000	NATL 1625DE	30,000	2000	677		Drilling
Reading & Bates	C E Thornton	Jackup	20.00	10000	DWS E3000	25,000	300		Para-1 Mas-16	Contracted To Petrobras
Rowan Co	Rowan Middletown	Jackup	13.63	10000	NATL 1625		300		Salvador	Available
Sedco Inc	Sedco 135-F	Semisubmersible	13.63	10000	OILWELL 3000E	25,000	800	430	Petrobras GP-1 GP-2	Preparing To Move
Sedco Intl SA	Sedco 135-D	Semisubmersible	16.75	5000	OILWELL 3000E	25,000	800	413	Petrobras-Campos	F P F
Sonat Offshore Drlg inc Group	Discover 534	Drillship	16.75	10000	NATL 1625DE	25,000	3000			Drilling
	Orion	Jackup	13.63	10000	NATL 1320DE	20,000	275			
Transworld Drlg	61	Semisubmersible	13.63	10000	EMSCO A1500E	20,000	600	380	Pampo	Production Mode
Tropic Drlg	DS Tainaron	Drillship	18.75	10000	NATL 1320UE	30,000	1000	500	Campos Basin	Drilling
CHILE										
Diamond M	Magallanes	Jackup	13.63	5000	OILWELL E3000	25,000	150	95	Strait of Magellan	Drilling
	Nugget	Jackup	13.63	5000	OILWELL E3000	30,000	300	118	Strait of Magellan	Drilling
VENEZUELA										
Loffland Bros	R-71-WO	Barge			IDECO H25				Zulia-Lake Maracaibo	Working
	V-101	Barge	6.00	5000	IDECO 711	10,000			Zulia W Ven-Lake Maracaibo	Standby
	V-105	Barge	10.00	5000	M-CSCO U914B	18,000			Zulia W Ven-Lake Maracaibo	Drilling
	V-114	Barge	10.00	5000	M-CSCO U914C	18,000			Zulia W Ven-Lake Maracaibo	Drilling
	V-116	Barge	10.00	5000	NATL 130	20,000			Zulia W Ven-Lake Maracaibo	Stacked
Perforaciones Alta Mar CA	Rig I	Tender			NATL 1625	20,000				Drilling
Rowan Co	Rowan Odessa	Jackup	13.63	10000	NATL 1625	25,000	300		Coro	Drilling
Santa Fe Drlg	Orinoco I (R132)	Barge	21.25	10000	OILWELL E2000	20,000	20			Drilling
	Reina Del Lago	Barge	12.00	3000	NATL 80E	14,000	100		Lake Maracaibo	Drilling
	Rey Del Lago	Barge	12.00	3000	NATL 80E	14,000	100		Lake Maracaibo	Drilling
Sonat Offshore Drlg Inc Group	Estrellita/T-27	Jackup/Tender	13.63	5000	NATL 1320	10,000	150			Drilling
	Polarcub/Lama	Jackup/Tender	12.00	5000	NATL 110	15,000	100			
	Rig 60/OV-1	Jackup/Tender	10.00	5000	EMSCO A1100E	14,000	100			
Western Offshore Drlg & Expl	Western Offshore IX	Drillship	18.75	10000	NATL 1625DE	25,000	750	280	Loran #2	Drilling
SOUTHEAST ASIA										
BRUNEI										
Maersk Drlg	Aquadril 1 SCP	Platform	13.63	5000	EMSCO C2 Type II	15,000			SWA 113	Drilling
Reading & Bates	Harvey H Ward	Jackup	13.63	10000	NATL 1625	25,000	300		Brunei-SWA/227	Contracted To Shell
	I J Pierce	Platform/Tender	20.00	5000	OILWELL 840E	18,000			S W Ampa Field #226	Contracted To Shell
	J W Nickle	Platform/Tender	20.00	5000	OILWELL 840E	18,000			Champion CPDP-25CP	Contracted To Shell
BURMA										
Forex Neptune and/or Affil	Trident 1	Jackup	13.63	10000	GAR-DEN 1500UE	21,700		250		Drilling

SOUTHEAST ASIA (Cont'd)

Contractor	Rig name or no.	Type	BOP Stack		Drwwks make & model	Rated drlg depth with 4½ in. pipe	Water Depth		Location	Status
			Size (ID)	Pressure rating			Rated	Current		
EAST KALIMANTAN										
Rowan Intl	Rowan Fairbanks	Barge	13.63	5000	NATL 1320UE	25,000	20		Tambora #11	Drilling
HONG KONG										
Global Marine Drlg	Glomar Adriatic VIII	Jackup	13.63	10000	NATL 1625DE	25,000	300			Under Construction
INDIA										
Atwood Oceanics	Gettysburg	Barge	18.75	10000	NATL 1320	20,000	600	165	Palk Strait PY-1-4A	Drilling
	Shenandoah	Jackup	13.63	10000	EMSCO C2	20,000	300	239	Platform SR-5	Drilling
Dixilyn-Field Drlg	95	Semisubmersible	18.75	10000	NATL 1625DE	25,000	600			Drilling
Griffin-Alexander Drlg	G-A I	Jackup	13.63	10000	UNIT EB1220	25,000	200		GSI-1	Drilling-Oil & Nat Gas Comm
Reading & Bates	J W Bates	Drillship	20.00	10000	NATL 1320UE	20,000	600		Bombay Harbor	Waiting On Orders
	W T Adams	Jackup	13.63	10000	NATL 1525E	25,000	300		Arabian Sea-Ratnagira R-12A	Contracted To ONGC
Sedco Intl SA	Sedco 445	Drillship	16.75	10000	OILWELL E3000	25,000	3000	956	Godauari Basin	Exploratory Drilling
INDONESIA										
Atwood Oceanics	Chancellorsville	Drillship	18.75	10000	EMSCO C2	20,000	1000	186	S China Sea-Strait of Malaca	Drilling-Conoco
	Margie	Semisubmersible	18.75	10000	NATL 1320	20,000	600	471	S China Sea-Natuna	Drilling
Dolphin Titan Intl	143	Tender/Jackup	13.63	10000	EMSCO A100E	16,000	150		Ardjuna-Java Sea	Drilling
Forex Neptune and/or Affil	37	Barge Gavrinis	13.63	5000	NATL 110UE	21,700	25	25	East Kalimantan	Drilling
	38	Barge Izenah	13.63	5000	NATL 110UE	21,700	25	25	East Kalimantan	Drilling
Global Marine Drlg	Glomar Robert F Bauer	Drillship	18.75	10000	NATL 1625DE	25,000	2500	2500		Drilling
Japan Drlg	Hakuryu III	Semisubmersible	18.75	10000	EMSCO C3111	30,000	1000	266	ANOA-6	Drilling
	Hakuryu IV	Jackup	13.63	10000	NATL 1625DE	25,000	295	25	WITA-1	Drilling
Ocean Drlg & Expl	Ocean Hurricane	Drillship	16.75	10000	NATL 1625	25,000	600	600	NBI-1X	Drilling
Penrod Drlg	84	Jackup	13.63	10.00	NATL 1320UE	25K	250			Drilling
	94	Jackup	13.63	10.00	NATL 1320UE	25K	250			Drilling
Reading & Bates	Chris Seger	Jackup	29.50	10000	IDECO 2500	20,000	210		Indonesia-KE-1	Contracted To Kodeco
	D K McIntosh	Jackup	30.00	10000	NATL 1320	20,000	250		Java Sea-Farida B-5	Contracted To IIAPCO
	Dickson M Saunders	Jackup/Tender	20.00	5000	NATL 80B	15,000	160		Java Sea-Yvonne-12	Contracted To IIAPCO
	J W McLean	Jackup	20.00	10000	NATL 130	20,000	225		Java Sea-UB-5	Contracted To ARCO
Santa Fe Drlg	Santa Fe Explorer	Jackup	20.00	5000	UNIT RIG U914	15,000	160		Java Sea	Drilling
	124	Jackup	13.63	5000	NATL 1625DE	20,000	250		Java Sea	Drilling
	127	Jackup	13.63	5000	NATL 1320UE	20,000	250		Java Sea	Drilling
	134	Jackup	21.25	10000	NATL 1320UE	20,000	250		Nakassar Strait	Drilling
Sonat Offshore Drlg Inc Group	Discoverer III	Drillship	16.75	5000	NATL 1625	20,000	600			Enroute
Transworld Drlg	71	Jackup	13.63	10000	EMSCO C3 Type 2	25,000	250	100		Drilling
Zapata Offshore	Enterprise (35)	Jackup			EMSCO C3 Type II			84	Java Sea	Drilling
	Investigator	Drillship	13.63	5000	IDECO H2500	16,500	450	129	Java Sea	Drilling
	32	Jackup	13.63	10000	NATL 1320	20,000	250		Java Sea	Drilling
JAPAN										
Japan Drlg	Hakuryu II	Semisubmersible	20.75	5000	EMSCO C311	30,000	656	98	Teradomari-Oki IA-II	Drilling
	Hakuryu V	Semisubmersible	18.75	10000	EMSCO C3II	30,000	1640	246	Nedo 57 Nishi 1 O/S Kyushu	Drilling
Keydril	Key Hawaii	Jackup	13.63	10000	NATL 1625DE	25,000	300		Tama	Under Construction
KALIMANTAN										
Rowan Intl	Rowan-Morgan City (Fxd Ht)	Barge	13.63	5000	NATL 1320UE	25,000	20		Tambora #12	Drilling
KOREA										
Houlder Marine Drlg	High Seas Driller	Semisubmersible	18.75	15000	NATL 1625E	25,000/5"				Under Construction
Santa Fe Drlg	135	Semisubmersible	18.75	10000	OILWELL E3000	25,000	1500			Under Construction
	140	Semisubmersible	18.75	10000	OILWELL E3000	25,000	1500			Under Construction
Sedco Inc	Sedco-712	Semisubmersible	18.75	15000	OILWELL E3000	25,000	1500			Under Construction
	Sedco-714	Semisubmersible	18.75	15000	OILWELL E3000	25,000	1500			Under Construction
MALAYSIA										
Atlantic Drlg	Benlomond	Drillship	18.75	10000	EMSCO C2 Type	20,000	1000	52 m	Tiga Papan-A (Offshore Sarah)	Contract to BP to Fall 83
Forex Neptune and/or Affil	Grand Large	Tender	13.63	5000	GAR-DEN 1500UE	21,700	250	250		Drilling
Loffland Bros	46	Platform	13.63	5000	M-CSCO U914CE	18,000				Stacked
	47	Platform	13.63	5000	M-CSCO U914	18,000			Ktrengganu Tiong 'A'	Working
Reading & Bates	Charley Graves	Platform/Tender	20.00	10000	NATL 1320UE	25,000			Sarawak-Bokor	Contracted To Shell
	D R Stewart	Jackup	13.63	10000	OILWELL E3000	25,000	300		Sarawak-ES-2	Contracted To Shell
Sedco Inc	Sedco 135-E	Semisubmersible	20.00		OILWELL 3000	25,000	600		BSP Borneo	Exploratory Drilling
Southeastern Ocean Drlg	Sedco 135-A	Semisubmersible	13.63	5000	OILWELL 3000	25,000	600	177	Sarawak	Exploratory
PHILIPPINES										
Western Oceanic	Apollo 1	Jackup	13.63	10000	EMSCO C3	20,000	300		Libro	Drilling
SINGAPORE										
Atwood Oceanics	Mission Viking	Barge	18.75	10000	NATL 1625DE	20,000	600			Drydock
Global Marine Drlg	Glomar Adriatic IV	Jackup	13.63	10000	NATL 1625DE	25,000	300			Under Construction
	Glomar Conception	Drillship	18.75	10000	NATL 1625DE	25,000	600	600		Drilling
Houston Offshore Intl	Sabine V	Jackup	13.63	10000	NATL 1320UE	20,000	200			U/C-Available 12/82
J L Offshore	Dan Queen	Semisubmersible	18.75	10000	NATL 1320UE	20,000	1000		Western Anchorage	Available
	Danwood Ice	Drillship	18.75	10000	NATL 1320UE	20,000	1000		Western Anchorage	Drilling

			BOP Stack				Water Depth			
Contractor	Rig name or no.	Type	Size (ID)	Pressure rating	Drwwks make & model	Rated drlg depth with 4½ in. pipe	Rated	Current	Location	Status
			SOUTHEAST ASIA (Cont'd)							
SINGAPORE (Cont'd)										
JFP Well Serv	JFP Seven	Jackup	13.63	1000	OILWELL E2000	25,000	300			Working On Location
Transocean Drlg	Transocean No 7	Jackup	13.63	10000	EMSCO C3 Type 2	25,000	300			Under Construction
Western Oceanic	Western Pacesetter IV	Semisubmersible	18.75	10000	EMSCO C3 Type II	25,000	1500			Under Construction
Western Offshore Drlg & Expl	Western Offshore IV	Barge	16.75	5000	NATL 1320DE	20,000	600			Idle
	Western Offshore VII	Barge	16.75	5000	GAR-DEN 2100RE	25,000	600			Idle
SOUTH KOREA										
Reading & Bates	Jim Cunningham	Semisubmersible	18.75	10000	NATL 1625DE	25,000	1500			U/C-Contracted-Cities Service
	M G Hulme Jr	Semisubmersible	18.75	10000	NATL 1625	25,000	1500			U/C-Contracted To Burmah Oil
TAIWAN										
Western Oceanic	Apollo III	Jackup	13.63	10000	EMSCO C3II	20,000	300			Under Construction
	Apollo IV	Jackup	13.63	10000	EMSCO C350	20,000	400			Under Construction
THAILAND										
Global Marine Drlg	Glomar Tender III	Tender	13.63	5000	NATL 1625DE	25,000			Urawan D8	Drilling
Great Eastern Drlg & Engrg	Seacrest	Drillship	18.75	10000	OILWELL E3000	25,000	10500	10500	Gulf of Thailand	Drilling
Reading & Bates	W D Kent	Platform-Tender	13.63	5000	NATL 1320UE	25,000			Erawan	Contracted To Union Oil
Western Oceanic	Western Polaris I	Jackup	13.63	10000	NATL 1320UE	20,000	250		Nong Kae	Drilling
			UNITED STATES							
ALABAMA-UNDESIGNATED										
Penrod Drlg	65 Mobil	Jackup	13.63	10000	EMSCO C3	30,000	210			Stacked
ALABAMA-MOBIL BAY										
Global Marine Drlg	Glomar High Island IV	Jackup	13.63	10000	NATL 1320UE	20,000	250	250	Blk 77	Drilling
ALABAMA-MOBILE										
Diamond M	Diamond M Falcon	Semisubmersible	18.75	10000	OILWELL E3000	30,000	2000			Under Construction-Del 1983
ALASKA-BERING SEA										
Sedco Maritime	Sedco 708	Semisubmersible	18.75	10000	OILWELL E3000	25,000	2000		North Aleutian Cost #1	Drilling
CALIFORNIA-UNDESIGNATED										
Challenger Drlg	#30 EOS				NATL 1320DE	22,000				Running
Diamond M	Diamond M Eagle	Semisubmerisble	18.75	10000	OILWELL E3000	30,000	2000			Under Construction-Del 7/82
	Diamond M General	Semisubmersible	18.75	10000	OILWELL E3000	30,000	1500			Mobilizing to West Coast
Global Marine Drlg	Glomar Coral Sea	Drillship	18.75	10000	NATL 1625DE	25,000	1500	1500		
	Glomar Java Sea	Drillship	18.75	10000	NATL 1625DE	25,000	1000	1000	S/L 309 #9	Drilling
	Glomar Pacific	Drillship	16.75	10000	NATL 1625DE	25,000	2000	2000	OCS-P-O183 #2	Drilling
Sedco Maritime	Sedco 702	Semisubmersible	21.25	10000	OILWELL E3000	25,000	1200	267	OCS Blk #P-0450-2 Well #2	Drilling
CALIFORNIA-HUNTINGTON BEACH										
Pool Offshore	426	Platform	13.63	5000	OIME 750	10,000		130	Platform Emmy	Working-Aminoil
CALIFORNIA-ISLE ESTHER-CHEVRON										
Pool Offshore	Rig #4	Platform	10.00	5000	NATL T45	6,000				Working
CALIFORNIA-LOS ANGELES										
Rowan Co	Rowan-Alaska	Jackup	13.63	10000	NATL 1625DE	30,000	350			Available
CALIFORNIA-OFFSHORE										
Global Marine Drlg	Glomar Atlantic	Drillship	18.75	10000	NATL 1625DE	25,000	2000	2000	OCS PO315#3	Drilling
CALIFORNIA-PLATFORM GRACE										
Global Marine Drlg	Glomar Platform I	Platform	13.63	5000	NATL 110UE	16,000			Blk P-0217	Drilling
	Glomar Platform II	Platform	13.63	5000	NATL 110UE	16,000			Blk P-0217	Drilling
CALIFORNIA-SAN FRANCISCO BAY										
Ocean Drlg & Expl	Ben Ocean Lancer	Drillship	16.75	10000	GAR-DEN 3000E	25,000	3000			Drydock
CALIFORNIA-SANTA BARBARA										
Keydril	Key Singapore	Jackup	13.63	10000	NATL 1625	25,000	300			Drilling
Zapata Offshore	Zapata Concord	Semisubmersible	18.75	10000	OILWELL E3000	25,000	2000	328	San Maria Basin	Drilling
CALIFORNIA-SANTA BARBARA CHNL										
Pool Offshore	428	Platform	13.62		IDECO 2000	20,000			PL Habitat	Working
	429	Platform			IDECO E2100	16,000			Platform Gilda	Working-Union Oil
CALIFORNIA-SANTA MARIA BASIN										
JFP Well Serv	JFP Three	Jackup	13.63	10.00	OILWELL E2000	25,000	300		OCS-P-0435	Drilling
CALIFORNIA-SANTA PAULA										
Pool Offshore	Rig #421	Platform	13.63	5000	OIME 750	12,000				Stacked
	Rig 10	Platform	13.62	5000	OIME 750	8,000				Stacked
	Rig 358	Platform	11.00		HOPPER 500	6,500				Stacked
	Rig 420	Platform	13.62	5000	OIME 750	8,000				Stacked
	Rig 422	Platform	13.62	5000	OIME 750	8,000				Stacked
	430	Platform			OIME 2000	16,000				Stacked
CALIFORNIA-VENTURA CITY										
Pool Offshore	Rig 38	Platform			FRANKS 550	5,500			Sespe Field	Working For Argo Petroleum

			BOP Stack				Water Depth			
Contractor	Rig name or no.	Type	Size (ID)	Pressure rating	Drwwks make & model	Rated drlg depth with 4½ in. pipe	Rated	Current	Location	Status
			UNITED STATES (Cont'd)							
FLORIDA-DESTIN DOME										
Diamond M	Rig 99	Jackup	13.63	5000	OILWELL E3000	30,000	300	277	Blk 563	Drilling
LOUISIANA-UNDESIGNATED										
Atlantic Pacific Marine	Gulf Commander	Jackup	13.63	5000	EMSCO A800WE	14,000	100			
	Ranger III	Jackup	10.00	5000	GAR-DEN DW500R	9,000	70			
	Ranger IV	Jackup	10.00	5000	OILWELL 660	9,000	73			
	11	Barge	13.63	10000	OILWELL E2000	25,000	13			
	12	Barge	13.63	5000	OILWELL E2000	25,000	13			
	14	Barge	13.63	5000	OILWELL E2000	25,000	13			
	7	Barge	13.63	10000	OILWELL 2000	25,000	20			Not Available
	8	Barge	13.63	10000	OILWELL 2000	25,000	20			
Blocker Drlg & Marine	Vermilion Bay	Barge	13.63	10000		30,000				Drilling
Booker Drlg	100	Platform	6.00	5000	GAR-DEN 500					Idle
	11	Platform	10.00	5000	GAR-DEN 3000					Idle
	120	Platform	10.00	5000	GAR-DEN 500					Idle
	150	Platform	10.00	5000	GAR-DEN 500					Idle
	160	Platform	10.00	5000	GAR-DEN 500					Idle
	50	Platform	10.00	5000	GAR-DEN 500					Idle
	60	Platform	10.00	5000	GAR-DEN 500					Idle
	70	Platform	10.00	5000	GAR-DEN 500					Idle
	8	Platform	2.50	5000	GAR-DEN 3000					Idle
	80	Platform	10.00	5000	GAR-DEN 500					Idle
	90	Platform	6.00	5000	GAR-DEN 500					Idle
	950	Platform	13.63	5000	GAR-DEN 1000	10,000				Idle
Cliffs Drlg	1	Barge	13.63	10000	M-CSCO U1220EB	30,000	18			Drilling
	2	Barge	13.63	10000	M-CSCO U1220EB	30,000	7'6-18			Drilling
	3	Barge	13.63	10000	M-CSCO U1220EB	30,000	7'6-18			Drilling
	4	Barge	13.63	10000	M-CSCO U1220EB	30,000	7'6-18			Drilling
Dolphin Titan Intl	103	Jackup	10.00	5000	IDECO H35D	15,000	10-70			Available
	123	Platform	13.63		IDECO E1700	20,000				Available
	124	Platform	13.63	5000	EMSCO U1220EB	20,000				Available
	125	Platform	13.63	5000	NATL 2320UE	25,000				Available
	126	Platform	13.63	5000		25,000				Available
	127	Platform	13.63	10000	EMSCO C3 Type 11	25,000				Available
Eagle Offshore Drlg Serv	Eagle M-101	Barge	13.63	10 Kpsi	OILWELL E3000	30,000	20			Stacked
Goldrus Marine Drlg	Goldrus Marine 2	Barge	13.63	10000	OILWELL 3000E	30,000	20	8		Available
	Goldrus Marine 3	Barge	13.63	10000	OILWELL 3000E	30,000	20	8		Available
Harris Well Serv	16	Barge	7.16	5000	M-CSCO U36A	10,000	12	12		Working
Huthnance Drlg	Vanguard II	Jackup	13.63	10000	EMSCO U1220EB	25,000	300			Exploratory Drlg
Livingston Oilwell Serv	11 Workover	Platform	2.50	5000	WILSON Super					Stacked
	14 Workover	Barge	6.00		WILSON Super 38		10			Stacked
	16 Workover	Platform	2.50	5000	WILSON Super					Stacked
	18 Workover	Barge	7.06	5000	WILSON Mogul 42	8,000	12			Stacked
	22 (Drilling)	Barge	11.00	5000	WILSON Super Giant	12,000	12			Stacked
	3 Workover	Platform	2.50	5000	WILSON Super					Stacked
	40 Hyd Snubbing	Platform	4.16	10000	HYDRA LHD 135T					Stacked
	41 Hyd Snubbing	Platform	4.16	10000	HYDRA LHD 135T					Stacked
Loffland Bros	Barge 154	Barge	10.00	5000	M-CSCO U1220	22,000				Stacked
	17	Platform	13.63	5000	M-CSCO U1220BE	22,000				Stacked
	4	Platform	13.63	5000	M-CSCO U1220BE	22,000				Stacked
	75	Platform	13.63	5000	M-CSCO U1220BE	22,000				Stacked
	78	Platform	13.63	5000	M-CSCO U1220BE	22,000				Stacked
	79	Platform	13.63	5000	M-CSCO U1220BE	22,000				Stacked
Mayronne	M-162	Platform	13.63	10000	NATL 1320UE	20,000				Drilling
Nicklos Drlg	Mr John 21	Barge			NATL 130	20,000				Drilling
	20 Mr E J	Barge			NATL 130	20,000	12	12		Available
	30	Tender Assisted			NATL 110	16,000		240		Available
Noble Drlg	NN-1	Jackup			GAR-DEN 1500	20,000	12-45			Stacked
	PB-1	Barge			GAR-DEN 1500	20,000				Stacked
	Sam Noble	Jackup			OILWELL E3000	25,000				Under Construction
Penrod Drlg	Barge 44	Barge			NATL 1625 DE	30,000	10			Stacked
	Barge 46	Barge	13.63	10000	EMSCO ECB	20,000	16			Stacked
	38	Platform	13.63	10000	NATL 1320UE	25,000	300			Stacked
	50	Submersible	13.63	10000	EMSCO A1500E	25,000	50			Stacked
	51	Submersible	13.63	10000	EMSCO A1550E	25,000	60			Stacked
	52	Jackup	13.63	10000	NATL 1320	25,000	250			Stacked
	53	Jackup	13.63	10000	NATL 1625DE	30,000	300			Stacked
	83	Jackup	13.63	10000	NATL 1320DE	25,000	250			Stacked
	86	Jackup	13.63	10000	NATL 1320UE	25,000	250			Stacked
Pool Offshore	Rig #452	Platform	13.63	5000	OIME 1500	8,000				Yard-Being Rebuilt
	53	Jackup			OIME 750	13,000	90		Chevron	Working
Rebstock Drlg	2	Barge	10.00	5000	NATL N80	14,000	12			Stacked
	3	Barge	10.00	5000	GAR-DEN 800	13,000	12			Stacked
	4	Barge	13.63	5000	OILWELL 860	18,000	12			Stacked
Rio Grande Drlg	4	Barge	13.63	10000	NATL 1320M	25,000	14		Fee #B-29	
Santa Fe Drlg	Blue Water No 2	Submersible	13.63	10000	NATL 1625DE	25,000	55			Drilling
	Blue Water No 4	Semisubmersible	16.75	10000	EMSCO C3	25,000	1500			Drilling
	Mariner 3	Semisubmersible	16.75	10000	OILWELL E2000	20,000	600	600		Idle
Service Equipment & Engrg	10	Platform	10.00		OIME 750	10,000				Stacked
	11	Platform	13.63	5000	IDECO E900	14,000				Stacked
	5	Platform	10.00		OIME 750	10,000				Stacked
	6	Platform	10.00		OIME 750	10,000				Stacked
	9	Platform	10.00		OIME 750	10,000				Stacked
Sonat Offshore Drlg Inc Group	Offshore Pegasus	Jackup	10.00	5000	NATL 110	16,000	125			Drilling
	Rig 25	Platform	13.63	5000	NATL 130E	15,000				Idle
LOUISIANA-ASSUMPTION										
Blocker Drlg & Marine	Terrebonne Bay	Barge	13.63	5000	OIME SL9E	20,000	12			Stacked
LOUISIANA-BAYOU SORREL										
Penrod Drlg	Barge 47	Barge			EMSCO A1500E	25,000	16	648		Drilling
	Barge 48	Barge	13.63	10000	NATL 1625DE	30,000	20	176		Drilling
LOUISIANA-BRETON SOUND										
Transworld Drlg	44	Submersible	13.63	5000	IDECO 1350S	18,000	40	19	Blk 29	Workover
LOUISIANA-BULLY CAMP										
Whalen Drlg	1	Barge	13.63	5000	NATL 1320UE	25,000	12	8	Blk 27-B	Drilling

UNITED STATES (Cont'd)

Contractor	Rig name or no.	Type	BOP Stack		Drwwks make & model	Rated drlg depth with 4½ in. pipe	Water Depth		Location	Status
			Size (ID)	Pressure rating			Rated	Current		
LOUISIANA-CAMERON										
CRC Mallard Well	Barge 1	Barge			WILSON Model 90	9,000				Stacked
Diamond M	Barge 40	Barge	10.00	5000	OILWELL 2000	25,000	12	15	S/L 9086 Well 2	Drilling
Goldrus Marine Drlg	Goldrus Marine 4	Barge	13.63	10000	OILWELL 3000E	30,000	20	8		
Pool Offshore	50-Offshore	Jackup	10.00	5000	OIME 750	10,000	80			Shipyard-5 Year Inspection
Quarles Drlg	16	Barge	13.63	5000	IDECO Super 711	17,000			Clair Marceaux #1	Drilling
Two R Drlg	19	Barge			EMSCO C3	25,000	12	8	Deep Lake	Drilling
	2R20	Barge			EMSCO C3	25,000	12	8	Deep Lake	Drilling
Zapata Offshore	Intrepid	Jackup	13.63	10000	UNIT U1220B	20,000	300	135	Blk 70	Drilling
LOUISIANA-EAST BAYOU PIGEON										
Glendel Offshore Inc	Mr Glen	Barge	13.63	10000	BRWSTR NE12	25,000	12	8		Drilling-Gulf Oil & Expl
LOUISIANA-EAST CAMERON										
Booker Drlg	14	Platform	10.00	5000	GAR-DEN 3000				Blk 338	W/O
Chiles Drlg	Platform I	Platform	13.63	10000	NATL 1320UE	20,000		125	Blk 240	Drilling
Dixilyn-Field Drlg	84	Jackup	13.63	10000	NATL 818MI	20,000	250		Blk 231	Drilling
Dolphin Titan Intl	104	Jackup	10.00	5000	IDECO H35D	15,000	10-70		Blk 46	Workover
Huthnance Drlg	12	Platform	13.63	10000	M-CSCO U1220	25,000			Blk 330	Developmental Drlg-Gulf
Keyes Offshore	Keyes - 301	Jackup	13.63	10000	EMSCO 2000	16,000	300	83	Blk 142	Drilling
Marine Drlg	J Storm XII	Jackup	13.63	10000	NATL 1320	20,000	200	123	Blk 47	Drilling-Committed
Ocean Drlg & Expl	Ocean Explorer	Semisubmersible	13.63	5000	EMSCO EDES	25,000	600	600	Blk 351	Drilling
Pool Offshore	Rig #14	Platform			NATL T45	6,000			Blk 349	Working-Marathon
Reading & Bates	Rig 50	Platform	13.63	10000	NATL 1320	18,000			Blk 220	Contracted To Texas Gas
Service Equipment & Engrg	12	Platform	13.63	500	IDECO E900	14,000			Blk 232-D	Drilling
Teledyne Movible Offshore	14	Platform	10.00	5000	GAR-DEN RE500	8,000			Blk 321	Drilling
Transworld Drlg	68	Submersible	13.63	10000	EMSCO C3 Type 2	25,000	100	27	Blk 2	Drilling
LOUISIANA-ELOI BAY										
Glendel Offshore Inc	Mr Beldon #7	Posted Barge	13.63	10000	BRWSTR NE12	25,000	20	15		Drilling-Texas Intl Petroleum
	Mr George #8	Posted Barge	13.63	10000	GAR-DEN 3000	30,000	25	17		Drilling-Texas Intl Petroleum
LOUISIANA-EUGENE ISLAND										
Booker Drlg	951	Platform	10.00	5000	GAR-DEN 1000	8,000			Blk 330	Drilling
	952	Platform	13.63	5000	GAR-DEN 1000	8,000			Blk 287	Drilling
Cactus Intl	103	Platform	13.63	5000	OILWELL E2000	25,000		265	Blk 337	Operating-Pennzoil
Diamond M	97	Platform	13.63	5000	OILWELL E2000	25,000		233	Blk 314	Drilling
Dolphin Titan Intl	101	Jackup	6.00	5000	IDECO H35D	15,000	10-70		Blk 89	Workover
Global Marine Drlg	Glomar High Island VI	Jackup	13.63	10000	NATL 1320UE	20,000	250	250	Blk 247	Drilling
	Glomar Main Pass II	Jackup	13.63	10000	NATL 1625DE	25,000	300	300	Blk 159	Drilling
Houston Offshore Intl	Sabine I	Jackup	13.63	10000	NATL 1320UE	20,000	200		Blk 136 #2	Drilling-Shell Offshore
Noble Drlg	S-55	Semisubmersible	13.63	10000	NATL 1625DE	25,000	80		Blk 129	Working
	24	Platform	13.63	10000	NATL 1625DE	25,000			Blk 360	Working
	28				GAR-DEN 1500E	20,000			Blk 351	Working
Ocean Drlg & Expl	Mr Charlie	Submersible	13.63	5000	EMSCO EDES	25,000	40	40	Blk 88	Drilling
	Ocean Traveler	Semisubmersible	13.63	10000	NATL 1625DE	25,000	600	600	Blk 316	Drilling
Penrod Drlg	31	Platform	13.63	10000	NATL 110UE	16,500	300	471	Blk 314-B	Drilling
	82	Jackup	13.63	10000	NATL 1320DE	25,000	250	250	Blk 10	Drilling
	88	Jackup	13.63	10000	NATL 1320UE	25,000	250		Blk 196	Drilling
Platform Well Serv	7	Platform	6.00	5000	OIME 750	7500			GOM	Working
Reading & Bates	Leo M Clark	Platform/Tender	13.63	10000	NATL 110M	18,000			Blk 215	Contracted To Tenneco
	63	Platform	13.63	10000	OILWELL E3000	25,000			Blk 315	Drilling-Contracted To McMoran
Teledyne Movible Offshore	6	Platform	13.63	5000	NATL 1320DE	20,000			Blk 273	Drilling
Transworld Drlg	47	Submersible	13.63	10000	EMSCO A1500E	20,000	70	24	Blk 68	Idle
	50	Jackup	13.63	5000	NATL 55	12,000	70	41	Blk 112	Idle
	65	Submersible	13.63	10000	EMSCO C3 Type II	25,000	70	19	Blk 49	Idle
Zapata Offshore	Louisiana	Submersible	13.63	5000	UNIT U1220BE	20,000	50	22	Blk 63	Drilling
LOUISIANA-FOURCHON										
Ocean Drlg & Expl	El Dorado	Submersible	13.63	5000	EMSCO EDES	25,000	70			Stacked
	John Hayward	Submersible	10.00	5000	EMSCO EDA	25,000	30			Stacked
LOUISIANA-GALVESTON BAY										
Glendel Offshore Inc	Mr Del	Barge	13.63	10000	BRWSTR NE12	25,000	20	10		Drilling-Howell Oil & Gas
LOUISIANA-GARDEN BANKS										
Dual Marine Drlg	23	Platform	13.58	10000	OILWELL E3000	25,000			Blk 236	Operating
LOUISIANA-GRAND CHANDELIER										
Penrod Drlg	63	Jackup	13.63	10000	NATL 1320UE	25,000	250	26	Blk 28	Drilling
LOUISIANA-GRAND ISLAND										
Diamond M	94	Platform	13.63	5000	OILWELL E2000	20,000		35	Blk 16	Drilling
Fluor Drlg Serv	Mr Mel #59	Jackup	13.63	10000	NATL C1625DE	30,000	350	218	Blk 90	Drilling-Available 12/82
Livingston Oilwell Serv	12 Workover	Platform	2.50	5000	WILSON Super				Blk 16	Working
	15 Workover	Platform	2.50	5000	WILSON Super 38				Blk 16	Working
LOUISIANA-GRAND ISLE										
Booker Drlg	130	Platform	10.00	5000	GAR-DEN 500				Blk 16	W/O
Loffland Bros	74	Platform	13.63	5000	M-CSCO U1220BE	22,000			Blk 20	Working
Penrod Drlg	37	Platform	13.63	10000	EMSCO C2	25,000	300		Blk 16	Drilling
Zapata Offshore	Zapata Explorer	Jackup	13.63	10000	OILWELL 3000E	25,000	240	90	Blk 15	Drilling
LOUISIANA-GREEN CANYON										
Zapata Offshore	Zapata Lexington	Semisubmersible	18.75	10000	OILWELL E3000	25,000	2000	380	Blk 4	Drilling
LOUISIANA-GREENS CANYON										
Keydril	Aleutian Key	Semisubmersible	18.75	10000	OILWELL E3000	25,000	3000	2000		Drilling
LOUISIANA-HARVEY										
Mayronne	M-142	Platform	13.63	5000	BRWSTR N12	18,000				Stacked In Harvey Yard
	M-152	Platform	13.63	5000	BRWSTR N20	18,000				Stacked In Harvey Yard

Contractor	Rig name or no.	Type	BOP Stack		Drwwks make & model	Rated drlg depth with 4½ in. pipe	Water Depth		Location	Status
			Size (ID)	Pressure rating			Rated	Current		

UNITED STATES (Cont'd)

Contractor	Rig name or no.	Type	Size (ID)	Pressure rating	Drwwks make & model	Rated drlg depth with 4½ in. pipe	Rated	Current	Location	Status
LOUISIANA-HARVEY (Cont'd)										
Pool Offshore	Rig #11	Platform	13.63	5000	NATL 110H	16,000				Stacked
	Rig #17	Platform	13.63	5000	OIME 1500	16,000				Stacked
	Rig #2	Platform	10.00	5000	NATL T45	7,000				Stacked
	Rig #3	Platform			NATL T45	6,000				Stacked
	Rig 423	Platform	13.63	5000	OIME 1000E	12,000				Stacked
	453	Platform	13.63	5000	OIME 1500	16,000				Stacked
	456	Platform	13.63	5000	OIME 1500	16,000				Stacked
	457	Platform	13.63	5000	OIME 1500	16,000				Stacked
	7	Platform	13.63	5000	NATL 110	16,000				Stacked
LOUISIANA-HIGH ISLAND										
Pool Offshore	140	Platform	10.00	5000	IDECO	8,000			Blk 517	Working-Gulf
LOUISIANA-HOUMA										
Quarles Drlg	23	Barge	13.63	10000	OILWELL E3000	30,000	28			Stacked
LOUISIANA-IBERIA										
Bay Drlg	Gardner	Semisubmersible	10.00	5000	EMSCO B3661	22,000	10	8	Mound Point	Drilling
Loffland Bros	Barge 143	Barge	10.00	5000	M-CSCO U1220	22,000				Working
Merit Drlg	2	Posted Barge	13.63	10000	OILWELL E2000	25,000	20	12	Brownell Kidd 1-19	Working
LOUISIANA-IBERVILLE										
Wheless Drlg	Barge 7	Barge	12.00	5000	NATL 130	25,000	12	10		
LOUISIANA-JEFFERSON										
Map Drlg	1	Barge	7.06	5000	OILWELL 66	11,000	8	8	Bayou Perot Field	Working Over
LOUISIANA-LAFAYETTE										
Challenger Drlg	38 EOS	Platform	13.63	5000	NATL 110	18,000				Stacked
LOUISIANA-LAFOURCHE										
Blocker Drlg & Marine	Trinity Bay	Barge	13.63	10000	IDECO E3000	30,000			Blk S/L 8720-1	Drilling
Diamond M	Rig 47	Posted Barge	13.63	5000	OILWELL E3000	25,000	18	15	Lake Inferme Gas Field	Drilling
Noble Drlg	Barge 3	Barge			NATL 1320UE	20,000				Working
	Barge 4	Barge			NATL 160S	25,000				Working
Rebstock Drlg	Rig No 5	Posted Barge	13.63	5000	NATL 1320	20,000	24	12	Little Temple	Drilling
Shank Drlg Dean	DS-2	Barge	10.00	5000	WILSON 150-2000	18,000	10	8		
Wheless Drlg	Barge 15	Barge	12.00	5000	NATL 130	25,000	12	8		
LOUISIANA-LAKE WASHINGTON										
Glendel Offshore Inc	Mr Carl	Barge	13.63	10000	BRWSTR NE12	25,000	12		Eloi Bay	Drilling-Pend Orielle Oil/Gas
Livingston Oilwell Serv	5 Workover	Barge	6.00	5000	WILSON Mogul 42		10			Working
LOUISIANA-MAIN PASS										
Diamond M Drlg	95	Platform	13.63	5000	OILWELL E2000	25,000		119	Blk 72	Drilling
Dolphin Titan Intl	122	Platform	13.63	5000	NATL 110UE	16,000			Federal Waters Blk 296	Drilling
Noble Drlg	26	Platform	13.63	10000	NATL 1320UE	20,000			Blk 313-A	Working
Platform Well Serv	8	Platform	10.00	5000	OIME 750	7500			GOM	Working
Pool Offshore	Rig #5	Platform	10.00	5000	NATL T45	6,000			Blk 72	Working-Mobil
Teledyne Movible Offshore	2	Submersible	12.00		NATL 1625DE	25,000	70	70	Blk 28	Drilling
Whalen Drlg	3	Barge	13.63	10000	NATL 1625DE	30,000	20	14	Blk 22	Completion Work
LOUISIANA-MISSISSIPPI CANYON										
Diamond M	New Era	Semisubmersible	18.75	10000	OILWELL E3000	30,000	1200	464	Blk 20	Drilling
Noble Drlg	#31	Platform			OILWELL E2000	20,000			Blk 148-192	Working
Penrod Drlg	34	Platform	13.63	10000	NATL 110UE	16,500	300	343	Blk 268	Drilling
Zapata Offshore	Zapata Yorktown	Semisubmersible	18.75	10000	OILWELL E3000	25,000	2000	1097	Blk 485	Drilling-Exxon
LOUISIANA-MORGAN CITY										
Cactus Intl	163	Platform	13.63	5000	EMSCO Electrohoist II	25,000				Stacked
Reading & Bates	Rig 40	Platform	13.63	10000	NATL 1625	18,000				Stacked
Rowan Intl	Barge 4	Barge	13.63	10000	NATL 1625DE	30,000	22	14		Available
Zapata Offshore	Vinegarroon	Jackup	13.63	10000	OILWELL 96	15,000	130			In Port
LOUISIANA-MUSTANG ISLAND										
Fluor Drlg Serv	Mr Dave #61	Jackup	13.63	10000	NATL 1320UE	20,000	250	57	Blk 796-L	Drilling-Available 11/82
LOUISIANA-NEW IBERIA										
Marlin Drlg	Marlin #10	Platform	11.00	10000	NATL 610E	10,000				Stacked
	Marlin No 5	Platform	13.63	10000	NATL 1320DE	20,000				Stacked
Mayronne	M-172	Platform	13.63	10000	NATL 1320UE	20,000				Stacked
LOUISIANA-PLAQUEMINES										
Diamond M	46	Barge-Posted	13.63	10000	OILWELL E3000	30,000	18	15	S/L 192 Blk 1	Drilling
Phoenix Management	Big Foot One	Jackup	10.63	10000	GAR-DEN 2100E	25,000	85	18	West Bay Ls #192 Well #147	Expl-Prod Drilling For Gulf
Quarles Drlg	18	Barge	11.00	10000	GAR-DEN 800E	14,000	10			Stacked
	20	Barge	11.00	10000	IDECO E3000	25,000	18		Blk 9162	Stacked
Shank Drlg Dean	DS-I	Barge	10.00	5000	BETH 10131500	18,000	10	8		
Two R Drlg	Two R-14	Barge			WILSON 250	25,000	20	10	Delacroix	Drilling
LOUISIANA-RABBIT ISLAND										
Noble Drlg	PB-2	Posted Barge			OILWELL E3000	25,000				Working
LOUISIANA-SABINE PASS										
Fluor Drlg Serv	Mr Gus II #55	Jackup	13.63	5000	NATL 160E	25,000	150	30		Stacked-Available
Ocean Drlg & Expl	Ocean Queen	Semisubmersible	13.63	5000	EMSCO A1500	25,000	1200	1200	Blk 12	Drilling
Reading & Bates	N J Guilbeau	Tender/Platform	13.63	10000	NATL 1320	18,000			Blk 215	Contracted To Tenneco
Rowan Co	Rowan Paris	Jackup	13.63	10000	NATL 1625	25,000	300			Available
LOUISIANA-SHIP SHOAL										
Cactus Intl	102	Platform	13.63	5000	EMSCO C2	25,000		120	Blk 238	Operating-Kerr McGee
Diamond M	93	Platform	13.63	5000	NATL 110	16,000		185	Blk 253	Drilling
Livingston Oilwell Serv	17 Workover (Concentric)	Platform	2.50	5000	WILSON Super 38				Blk 269	Working
Marine Drlg	J Storm XIV	Jackup	13.63	10000	NATL 1320	20,000	200	87	Blk 91	Drilling-Committed
Marlin Drlg	Marlin No 2	Platform	13.63	5000	NATL 1320DE	20,000		230	Blk 181 B-10	Drilling
Merit Drlg	3	Posted Barge	13.63	10000	OILWELL E2000	25,000	20	8	Blk 38	Working
Ocean Drlg & Expl	Ocean Champion	Jackup	13.63	10000	NATL 1625DE	25,000	250	250	Blk 78	Drilling
	Ocean Pride	Jackup	13.63	5000	NATL 110	25,000	152	152	Blk 114	Drilling

			BOP Stack				Water Depth			
Contractor	Rig name or no.	Type	Size (ID)	Pressure rating	Drwwks make & model	Rated drlg depth with 4½ in. pipe	Rated	Current	Location	Status
UNITED STATES (Cont'd)										
LOUISIANA-SHIP SHOAL (Cont'd)										
Penrod Drlg	35	Platform	13.63	10000	NATL 1320UE	16,500	300	20	Blk 229	Drilling
Pool Offshore	9	Platform	13.63	5000	NATL T45	6,000			Blk 272	Working-Marathon
Salen Protexa Drlg	Totonaca	Jackup	13.63	10000	M-CSCO U1220BE	20,000	250		Blk 182	Drilling
Transworld Drlg	54	Submersible	13.63	5000	EMSCO B3661	20,000	175	115	Blk 218	Drilling
	73	Submersible	13.63	10000	OILWELL E3000	25,000	100	35	Blk 10	Drilling
Western Oceanic	Western Triton III	Jackup	13.63	10000	EMSCO C2	20,000	250		Blk 249	Drilling
LOUISIANA-SOUTH FLORENCE										
Penrod Drlg	Barge 43	Barge			NATL 1320DE	25,000	12		Vermilion Ph	Drilling
LOUISIANA-SOUTH MARSH ISLAND										
Bokenkamp Drlg	Rig #1	Platform	13.63	10000	OILWELL E2000	25,000			Blk 33	Drilling
Booker Drlg	20	Platform	6.00	5000	GAR-DEN 500				Blk 58	W/O
Fluor Drlg Serv	Mr Sam #55	Jackup	13.63	5000	GAR-DEN 1500RE	25,000	155	70	Blk 11	Drilling
Global Marine Drlg	Glomar High Island VII	Jackup	13.63	10000	NATL 1320UE	20,000	250	250	Blk 236	Drilling
Huthnance Drlg	Rig No 11	Platform	13.63	5000	M-CSCO U1220	25,000			Blk 99	Developmental Drlg-Exxon
Marine Drlg	J Storm XV	Jackup	13.63	10000	NATL 1625M	25,000	250		Blk 245	Drilling-Committed
Ocean Drlg & Expl	Ocean 66	Jackup	13.63	5000	EMSCO C3 Type 1	25,000	120	120	Blk 8	Drilling
Pool Offshore	Rig #136	Platform	13.63	5000	NATL 110	16,000			Blk 141	Working-Marathon
	23	Platform			NATL T45	7,000			Blk 268	Working-Placid
Teledyne Movible Offshore	5	Platform	13.63	5000	NATL 1320D	20,000			Blk 130	Drilling
Temple Drlg	Apache	Jackup	13.63	10000	OILWELL E3000	25,000	55	40	Blk 243	Drilling
Zapata Offshore	Rig 34	Self-Cont Platform			IDECO E3000				Blk 173	Drilling
LOUISIANA-SOUTH PASS										
Bokenkamp Drlg	Rig #2	Platform	13.63	10000	OILWELL E2000	25,000			Blk 78	Drilling
Booker Drlg	30	Platform	6.00	5000	GAR-DEN 500				Blk 65	W/O
Dolphin Titan Intl	102	Jackup	6.00	5000	IDECO H35D	15,000	10-70		Blk 27	Workover
Dual Drlg	39	Platform	13.63	10000	OILWELL E3000	25,000			Blk 89B	Operating
Dual Marine Drlg	24	Platform	13.58	10000	OILWELL E2000	25,000			Blk 78	Operating
Dual Offshore	12	Platform	13.58	10000	EMSCO C2	25,000			Blk 89	Operating
Huthnance Drlg	14	Platform	13.63	10000	M-CSCO U1220	25,000			Blk 77	Developmental Drlg-Chevron
	15	Platform	13.63	5000	M-CSCO U1220	25,000			Blk 49	Developmental Drlg-Gulf
Ocean Drlg & Expl	Ocean Driller	Semisubmersible	13.63	10000	EMSCO C2	25,000	600	600	Blk 38	Drilling
Pool Offshore	Rig #8	Platform	10.00	5000	NATL T45	6,000			Blk 70	Working-Shell
	142	Platform			750 HP WILSON 75	10,000			Blk 78	Working-Pennzoil
	425	Platform	13.63	5000	OIME 1000	16,000			Blk 54	Working-Texaco
	51	Jackup	10.00	5000	OIME 750	10,000	80		Blk 10 90M	Working-Mobil
	80	Platform	13.63	5000	IDECO 2000	20,000				Working-Shell
LOUISIANA-SOUTH PELTO										
Houtech Well Serv	Houtech JU-III	Jackup	11.25	10000	GAR-DEN 700M	10,000	73	30	Blk 8	Running
Marine Drlg	J Storm XI	Jackup	13.63	10000	NATL 1320	20,000	200	40	Blk 8	Drilling-Committed
Ocean Drlg & Expl	Ocean Liberty	Jackup	10.00	5000	NATL 80	12,000	80	80	Blk 19	Drilling
LOUISIANA-SOUTH TIMBALIER										
Dolphin Titan Intl	129	Platform	13.63	10000	EMSCO C3 Type 11	25,000			Blk 165	Drilling
Fluor Drlg Serv	Mr Si #60	Jackup	13.63	10000	NATL C1625DE	30,000	350	115	Blk 195	Drilling-Available 12/82
Ocean Drlg & Expl	Barge A	Submersible	14.00	5000	IDECO 2500	25,000	70	70	Blk 24	Drilling
	Ocean Chief	Jackup	13.63	5000	EMSCO A1500	25,000	225		Blk 147	Drilling
	Ocean Patriot	Jackup	13.63	10000	NATL 1320ME	25,000	152	152	Blk 87	Drilling
Penrod Drlg	69 Mobil	Jackup	13.63	10000	NATL 1625DE	30,000	330	188	Blk 188	Drilling
Reading & Bates	Geo M Reading	Platform/Tender	13.63	10000	IDECO M2500	20,000			Blk 27	Contracted To Tenneco
Service Equipment & Engrg	4	Platform	10.00		OIME 500				Blk 172-C	Workover
	7	Platform	10.00		OIME 750	10,000			Blk 131-J	Workover
Temple Drlg	Cheyenne	Jackup	13.63	10000	OILWELL E2500	25,000	200	85	Blk 36	Drilling
LOUISIANA-ST BERNARD										
Diamond M	Barge 15	Barge	10.00	5000	BETH B1013	14,000	10			Stacked
	Barge 26	Barge	10.00	5000	OILWELL 2000	20,000	12			Stacked
LOUISIANA-ST CHARLES										
CRC Mallard Well	Barge 4	Barge			NATL 80	[illegible]				Drilling-Amoco
LOUISIANA-ST MARTIN										
CRC Mallard Serv	35					10,000				Stacked
CRC Mallard Well	Mallard 33		6.00			8,000			GOM	Stacked
	Mallard 42	Platform	10.00		WILSON Model 65	14,000				Stacked
	Mallard 43	Platform	10.00		WILSON Model 65	14,000				Stacked
	34		6.00			10,000				Stacked
	44	Platform	10.00		WILSON Model 65	14,000				Stacked
	45		10.00		WILSON 65	8,000				Stacked
	46		13.63		WILSON Model 65	12,500				Stacked
Goldrus Marine Drlg	Goldrus Marine 1	Barge	13.63	10000	OILWELL 3000E	30,000	20	8		
Two R Drlg	Two R-6	Barge			EMSCO	25,000	12			Stacked
Wilson Bros Drlg	Barge A	Barge Non-Posted	13.63	5000	IDECO H1700	16,500	12	8		
LOUISIANA-ST MARY										
Bay Drlg	Gibbens	Semisubmersible	10.00	5000	NATL 130	18,000	10	8	Little Bay	Drilling
	Hebert	Semisubmersible	10.00	5000	EMSCO BL1013	16,500	10		Bateman Lake	Stacked
	St John	Semisubmersible	10.00	5000	NATL 1625M	25,000	11	11	Bateman Lake	Drilling
CRC Mallard Well	Barge 3	Barge			NATL 55	9,000				Drilling
	Barge 9	Barge			WILSON Model 90	11,000				Drilling-Exxon
Diamond M	Barge 16	Barge	13.63	5000	IDECO E2500	25,000	12			Stacked
	Barge 5	Barge	10.00	5000	BRWSTR N12A	18,000	10			Stacked
	98	Platform	13.63	5000	EMSCO A1500E	20,000				Stacked
Phoenix Management	#3-The Mr Ray	Posted Barge	10.63	10000	GAR-DEN 2100E	30,000	8.5		S/L 8396 #1-Atchafalaya Bay	Drilling For Home Petroleum
Two R Drlg	Two R-16	Barge			EMSCO C3	25,000	12			Stacked
	17	Barge			EMSCO Model CEC3	25,000	22	10	Point Chevreuil	Drilling
LOUISIANA-TERREBONNE										
Bay Drlg	Matagorda Bay	Semisubmersible	10.00	5000	EMSCO BL3661	25,000	14		Lake Barge	Stacked
	Mr Harvy	Semisubmersible	10.00	5000	NATL 1625M	25,000	12		Callon Island	Stacked
Diamond M	Barge 14	Barge	10.00	5000	EMSCO J1400	20,000	12	15	Bayou Sauveur	Drilling
Loffland Bros	Barge 153	Barge	10.00	5000	BETH 1013	15,000				Working
Quarles Drlg	17	Barge	11.00	10000	NATL 160E	25,000	20	9	Mahler #1-East Bayou Dularge	Drilling
	21	Barge	13.63	10000	OILWELL 940E	20,000	30	11	Ship Shoal Blk 15 OCS-G 3411-4	

UNITED STATES (Cont'd)

Contractor	Rig name or no.	Type	BOP Stack		Drwwks make & model	Rated drlg depth with 4½ in. pipe	Water Depth		Location	Status
			Size (ID)	Pressure rating			Rated	Current		
LOUISIANA-TERREBONNE (Cont'd)										
Resource Drlg	W M Keck Sr	Barge	13.63	5000	NATL 160	20,000		6		Drilling
Shank Drlg Dean	4	Barge			EMSCO C3	30,000	12	10		Drilling
Two R Drlg	Two R-10	Barge			NATL 1320M	20,000	10			Stacked
	Two R-12	Barge			NATL 1625UE	25,000	12	8	Four Isle Dome	Drilling
	Two R-15	Barge			EMSCO C3	25,000	10			Stacked
	Two R-2	Barge			EMSCO B3661	25,000	10			Stacked
	Two-18	Barge			EMSCO C3	25,000	12	8	Four Isle Dome	Drilling
	2R21	Barge			EMSCO C3	25,000	12		Wander Lake Area	Drilling
Wheless Drlg	Barge 14	Barge	12.00	5000	EMSCO J1400	18,000	12	8		
	Barge 5	Barge	12.00	5000	EMSCO J1400	20,000	18	12		
	Barge 8	Barge	12.00	5000	NATL 130	20,000	12			Drilling
	Barge 9	Barge	12.00	5000	IDECO 2500	25,000	12	8		
	11	Barge	12.00	5000	OILWELL M3000	30,000	18	12		
LOUISIANA-TIMBALIER										
Zapata Offshore	Saratoga (27)	Semisubmersible			OILWELL E3000			284		Drilling
LOUISIANA-TIMBALIER BAY										
Livingston Oilwell Serv	20 Workover	Barge	2.50	5000	WILSON Super 38		10		Timbalier Bay	Working
LOUISIANA-VERMILION										
Booker Drlg	110	Platform	10.00	5000	GAR-DEN 500				Blk 245	W/O
CRC Mallard Well	Barge 7	Barge			NATL 55	11,000				Drilling-Amoco
Diamond M	41	Barge-Posted	10.00	5000	OILWELL 2000	25,000	18	15	Blk E-4	Drilling
	42	Barge-Posted	10.00	5000	OILWELL 2000	25,000	18	15	Blk 10	Drilling
Dixilyn-Field Drlg	DF-86	Jackup	13.63	10000	NATL 1320UE	20,000	200		Blk 104	Drilling
Fluor Drlg Serv	Rig 63	Platform	13.63	10000	NATL 1320UE	20,000			Blk 221	Drilling
Global Marine Drlg	Glomar High Island I	Jackup	13.63	10000	NATL 1320UE	20,000	250	250	Blk 61	Drilling
Griffin-Alexander Drlg	G-A VI	Jackup	13.63	10000	UNIT EB1220	25,000	200		Blk 35-#5	Drilling-Union Oil
	G-A VII	Jackup	13.63	10000	UNIT EB1220	25,000	250		Blk 292-#1	Drilling-Shell
Huthnance Drlg	Vanguard I	Jackup	13.63	10000	M-CSCO U1220EB	25,000	300		Blk 260	Developmental Drlg
Keyes Offshore	Keyes - 250	Jackup	13.63	10000	EMSCO CII	20,000	250	160	Blk 264	Drilling
Marine Drlg	J Storm IX	Jackup	13.63	10000	NATL 1320	20,000	195	62	Blk 253	Drilling-Committed
Marlin Drlg	Marlin No 1 Tender Type	Platform	13.63	5000	NATL 1320DE	20,000		185	Blk 122 A-6	Drilling
Merit Drlg	5	Posted Barge	13.63	10000	OILWELL E2000	25,000	20	12	Blk 16	Working
Nicklos Drlg	82	Self-Cont Platform			OILWELL E2000	20,000		12	Blk 381	Drilling
Noble Drlg	Ed Holt	Jackup			OILWELL E3000	25,000			Blk 213	Working
	PB-3	Posted Barge			NATL 1625DE	25,000			Blk 31	Working
Ocean Drlg & Expl	Ocean Star	Jackup	13.63	5000	NATL 1320UE	25,000	175	175	Blk 75	Drilling
Penrod Drlg	54	Jackup	13.63	10000	NATL 1625DE	30,000	300	83	Blk 72	Drilling
Quarles Drlg	22	Barge	11.00	10000	OILWELL E3000	30,000	23	10	Blk 31 OCS-G 2868 #5	Drilling
Savage Drlg	Ponca	Jackup	13.00	10000	NATL 1320UE	25,000	150		85 Blk 153	Working
Shank Drlg Dean	DS-3	Barge	10.00	5000	BETH B-3661	25,000	12	10		
Teledyne Movible Offshore	16	Jackup	13.63	10000	EMSCO C3	25,000	250	250	Blk 303	Drilling
	18	Jackup	13.63	10000	M-CSCO U1220EB	25,000	250	250	Blk 201	Drilling
	19	Jackup	13.63	10000	EMSCO 1C3	25,000	250	250	Blk 34	Drilling
	3	Submersible	13.63	10000	EMSCO EDES	20,000	45		Blk 35	Stacked
Transworld Drlg	59	Jackup	13.63	5000	NATL 1320UE	20,000	125	62	Blk 131	Drilling
	72	Submersible	13.63	10000	OILWELL E3000	25,000	100	17	Blk 91	Drilling
Two R Drlg	Two R-1	Barge			BETH B3661	25,000	10	8	Intracoastal City	Drilling
LOUISIANA-WEEKS ISLAND										
Glendel Offshore Inc	Mr "A W"	Barge	13.63	10000	BRWSTR NE12	25,000	12			Drilling-Stone Oil
LOUISIANA-WEST CAMERON										
Bokenkamp Drlg	Rig #3	Platform	13.63	10000	OILWELL E2000	25,000			Blk 536	Rigging Up
Cactus Intl	101	Platform	13.63	5000	EMSCO Electrohoist II	25,000		394	Blk 648	Operating-Sun
	104	Platform	13.63	5000	EMSCO Electro Hoist II	25,000		80	Blk 253	Operating-Pennzoil
Chiles Drlg	Gulf Wind	Jackup	13.63	10000	NATL 1320UE	18,000	150	30	Blk 102	Exploration
	Platform II	Platform	13.63	10000	NATL 1320UE	20,000		240	Blk 170	Drilling
Diamond M	Century	Semisubmersible	18.75	10000	OILWELL E3000	30,000	600	170	Blk 510	Drilling
Dixilyn-Field Drlg	D-F 61	Platform	13.63	5000	NATL 1320UE	20,000	20000		Blk 215	Drilling
Helmerich & Payne Intl Drlg	100	Platform	13.63	10000	OILWELL E3000	30,000			Blk 211-C Platform	
Houston Offshore Intl	Sabine IV	Jackup	13.63	10000	NATL 1320UE	20,000	200		Blk 447 #2	Drilling-CNG Producing Co
Huthnance Drlg	Acadian Spirit	Jackup	13.63	10000	EMSCO C2	25,000	112	25	Blk 27	Exploratory Drlg-Chevron
	Charger I	Jackup	21.25	2000	M-CSCO U1220EB	25,000	150		Blk 101	Exploratory Drlg-Superior
Keyes Offshore	Keyes - 302	Jackup	13.63	10000	EMSCO CII	20,000	300	38	Blk 91	Drilling
Marine Drlg	J Storm VII	Jackup	13.63	10000	NATL 1625M	25,000	377	200	Blk 211	Drilling-Committed
	J Storm XVII	Jackup	13.63	10000	NATL 1320M	20,000	250		Blk 63	Drilling-Committed
Nicklos Drlg	27	Platform			NATL 110UE	16,000		250	Blk 597	Drilling
Ocean Drlg & Expl	Ocean Leader	Jackup	13.63	5000	NATL 130	25,000	175	175	Blk 149	Drilling
	Odeco Seven	Submersible	13.63	5000	IDECO E2500	25,000	35	35	Blk 48	Drilling
Penrod Drlg	60	Jackup	13.63	10000	EMSCO C3	30,000	330	214		Drilling
Pool Offshore	15	Platform			NATL T45	6,000			Blk 616 90M	Working-Exxon
	52	Jackup	10.00	5000	OIME 750	10,000	80		Blk 65 90M	Working-Shell
Reading & Bates	Randolph Yost	Jackup	13.63	10000	OILWELL E3000	20,000	300		Blk 66	Contracted To Conoco
Rowan Co	Rowan Midland	Semisubmersible	13.63	10000	NATL 1625	25,000	600		Blk 618	Drilling
Salen Protexa Drlg	Salenergy I	Jackup	13.63	10000	M-CSCO U1220EB	20,000	250	168	Blk 370	Drilling
Temple Drlg	Comanche	Jackup	13.63	10000	OILWELL E2000	25,000	150	80	Blk 204	Drilling
Transworld Drlg	64	Jackup	13.63	10000	OILWELL E3000	25,000	300	42	Blk 107	Drilling
	70	Submersible	13.63	10000	OILWELL E3000	25,000	100	39	Blk 132	Drilling
LOUISIANA-WEST DELTA										
Bokenkamp Drlg	Rig #4	Platform	13.63	10000	OILWELL E2000	25,000			Blk 109	Drilling
Booker Drlg	Rig No 170	Platform	10.00	5000	GAR-DEN 500				Blk 79	W/O
	10	Platform	10.00	5000	GAR-DEN 3000				Blk 73	W/O
	140	Platform	6.00	5000	GAR-DEN 500				Blk 95	W/O
	6	Platform	2.50	5000	GAR-DEN 3000				Blk 73	W/O
Dixilyn-Field Drlg	80	Jackup	13.63	10000	NATL 1320DE	20,000	370		Blk 79	Drilling
Dolphin Titan Intl	128	Platform	13.63	10000	EMSCO C3 Type 11	25,000			Blk 86A	Drilling
Dual Offshore	16	Platform	13.58	5000	NATL 1320UE	25,000			Blk 117-B	Operating
Houtech Well Serv	Houtech JU-II	Jackup	11.25	10000	GAR-DEN 700M	10,000	73	30	Blk 27	Moving To Location
Keyes Offshore	Keyes - 150	Jackup	13.63	10000	EMSCO C1	16,000	150	43	Blk 30	Drilling
Livingston Oilwell Serv	4 Workover	Platform	2.50	5000	WILSON Super				Blk 30	Working
	8 Workover	Platform	2.50	5000	WILSON Super 38				Blk 30	Working
Noble Drlg	30	Platform	13.63	10000	GAR-DEN 1500E	20,000			Blk 117	Working
Ocean Drlg & Expl	Ocean Viking	Semisubmersible	13.63	10000	EMSCO A1500	25,000	600	600	Blk 143	Drilling
Pool Offshore	455		13.63	5000	OIME 1500	16,000			Blk 30-E	Working-Shell
Transworld Drlg	62	Jackup	13.63	10000	EMSCO C3 Type II	25,000	300	98	Blk 67	Drilling

Contractor	Rig name or no.	Type	BOP Stack		Drwwks make & model	Rated drlg depth with 4½ in. pipe	Water Depth		Location	Status
			Size (ID)	Pressure rating			Rated	Current		
UNITED STATES (Cont'd)										
LOUISIANA-WHITE LAKE										
Livingston Oilwell Serv	24	Barge	11.00	5000	WILSON Super Giant	12,000	12			Working
MARYLAND-SPARROWS POINT										
Phoenix Management	Rig #5-The Mr Ric	Jackup	13.63	10000	GAR-DEN 2100E	20,000	100			Being Outfitted In Shipyard
MISSISSIPPI-PASCAGOULA										
Global Marine Drlg	Glomar Main Pass IV	Jackup	13.63	10000	NATL 1625DE	25,000	300			Under Construction
Keyes Offshore	Keyes 303	Jackup	13.63	10000	EMSCO CIII	25,000	300			Under Construction
Ocean Drlg & Expl	St Louis	Submersible	13.63	5000	EMSCO EDES	25,000	30	30		Repairs
RHODE ISLAND-GEORGES BANK										
Western Oceanic	Alaskan Star	Semisubmersible	16.75	10000	EMSCO Model C3 Type	25,000	1500		Blk 187	Drilling
TEXAS-UNDESIGNATED										
Cliffs Drlg	Cliffs LaSalle	Jackup	13.63	10000	NATL 1320UE	25,000	17/135			Drilling
	Jack-up #2	Jackup	13.63	10000	NATL 1320UE	25,000	17/155			Drilling
CRC Mallard Well	Barge 5	Barge			NATL 80B	11,000				Stacked
Global Marine Drlg	Glomar Tender I	Tender	13.63	5000	NATL 1625DE	20,000				In Port For Painting/Cleaning
	Glomar Tender II	Tender	16.75	5000	NATL 1625DE	20,000				In Port For Painting/Cleaning
Griffin-Alexander Drlg	G-A II	Jackup	13.63	10000	UNIT EB1200	25,000	200			Stacked
Penrod Drlg	55	Jackup	13.63	10000	NATL 1625DE	30,000	150			Stacked
	66 Mobile	Jackup	13.63	10000	NATL 1625DE	30,000	210			Stacked
Phoenix Management	#4	Hover Barge	10.63	10000	GAR-DEN 2100E	25,000	10			In Design Stage
Rio Grande Drlg	1	Barge	13.63	5000	NATL 110M	18,000	14		S/T #65	
Sedco Dubai	Sedco 601	Semisubmersible	18.75	10000	EMSCO C2	20,000	1500			En Route
Zapata Offshore	Rig 8	Platform	13.63	5000	EMSCO A1100E	15,000		172	Blk 6	Drilling
	29	Platform	13.63	10000	OILWELL E2000	20,000		164	GOM	Drilling
TEXAS-ARANSAS										
Matagorda Marine Drlg	5	Barge	10.00	3000	NATL T45	9,500	16		Cove Harbor Dock	Stacked
	7	Barge	6.00	5000	NATL T20	6,000	10		Cove Harbor Dock	Stacked
TEXAS-BRAZORIA										
Temple Drlg	Tejas	Barge	13.63	10000	IDECO E3000	30,000	18	11		Completing
TEXAS-BRAZOS										
Chiles Drlg	Gulfstream	Jackup	13.63	10000	NATL 110UE	16,000	150	124	Blk 578	Drilling
Fluor Drlg Serv	Rig 62	Platform	13.63	10000	NATL 1320UE	20,000			Blk A-19	Drilling-Available 1/83
Marine Drlg	J Storm III	Jackup	13.63	10000	NATL 1625M	25,000	250	26	Blk A-133	Drilling-Committed
	J Storm X	Jackup	13.63	10000	NATL 1320	20,000	250	54	Blk 527-A #5	Drilling-Committed
	J Storm XVI	Jackup	13.63	10000	NATL 1320	20,000	250		Blk A-39	Drilling-Committed
Noble Drlg	29	Platform	13.63	10000	OILWELL E2000	20,000			Blk A-40	Working
Penrod Drlg	61	Jackup	13.63	10000	EMSCO C3	30,000	340	182	Blk A-3	Drilling
Salen Protexa Drlg	Nahuatl	Jackup	13.63	10000	M-CSCO U1220BE	20,000	250		Blk 442	Drilling
TEXAS-BROWNSVILLE										
Chiles Drlg	Seabee	Jackup	13.63	10000	NATL 1625DE	25,000	250			Under Construction
Global Marine Drlg	Glomar Adriatic V	Jackup	13.63	10000	NATL 1625DE	25,000	300	300		Under Construction
	Glomar Adriatic VI	Jackup	13.63	10000	NATL 1625DE	25,000	300	300		Under Construction
	Glomar Adriatic VII	Jackup	13.63	10000	NATL 1625DE	25,000	300	300		Under Construction
TEXAS-BUFFALO										
Quarles Drlg	19	Barge	11.00	5000	OILWELL 96	15,000				Stacked
TEXAS-CHAMBERS										
Diamond M	Barge 29	Barge	10.00	5000	OILWELL 96	20,000	10			Stacked
TEXAS-CORPUS CHRISTI CHANNEL										
Pool Offshore	Rig 54	Jackup	13.62	5000	IDECO E900	10,000	14-90			Stacked
TEXAS-EAST BREAKS										
Marlin Drlg	Marlin 15	Platform	13.63	1000	NATL 1320DE	20,000			Blk 160 A	Drilling
	Marlin 16	Platform	13.63	1000	NATL 1320DE	20,000			Blk 161 A	Drilling
Service Equipment & Engrg	15								Blk 159	Drilling
TEXAS-GALVESTON										
MGF Drlg	31	Barge	10.00	5000	OILWELL 76	12,000	8-10			Stacked
	37	Barge	6.00	5000	GAR-DEN 500	9,000	8-10	8-10		Running
Ocean Drlg & Expl	Gulftide	Jackup	13.63	10000	NATL 1625DE	25,000	250			Stacked
	Ocean Tempest	Drillship	16.75	10000	NATL 1625DE	25,000	600			Stacked
Rowan Intl	Rowan-Houston		13.63	10000	NATL 1325UE	25,000	225	225	Pier 41	Available
Western Oceanic	Western Delta	Jackup	13.63	5000	NATL Type 80UE	15,000	173		Blk 384	Drilling
TEXAS-GALVESTON BAY										
Matagorda Marine Drlg	Barge 9	Barge	13.63	5000	GAR-DEN PZ8		9		S/T 75-2	
TEXAS-HIGH ISLAND										
Cactus Intl	165	Platform	13.63	5000	OILWELL E2000	25,000		185	Blk 472	Operating-Pennzoil
Dixilyn-Field Drlg	85	Jackup	13.63	10000	NATL 1320UE		200		Blk 199	Drilling
Dual Drlg	29	Platform	13.63	10000	EMSCO C3	25,000			Blk 570	Operating
Dual Rig 25 Ltd	25	Platform	13.58	10000	OILWELL E3000	25,000			Blk 466	Operating
Griffin-Alexander Drlg	G-A V	Jackup	13.63	10000	UNIT EB1220	25,000	200		Blk 98-#7	Drilling-Kilroy
Houtech Well Serv	Houtech JU-I	Jackup	11.25	10000	GAR-DEN 700M	10,000	73	40	Blk 10-L	Running
Huthnance Drlg	Charger II	Jackup	13.63	10000	M-CSCO U1220EB	25,000	150		Blk 139	Exploratory Drlg-Superior
Keyes Offshore	Keyes - 200	Jackup	13.63	10000	EMSCO CII	20,000	200	60	Blk A-6	Drilling
Loffland Bros	76	Platform	13.63	5000	M-CSCO U1220BE	22,000			Blk 582	Working
Moran Drlg	Morco II	Jackup	13.63	10000	EMSCO C2	23,000	250	172	Blk 283-A	Drilling
Noble Drlg	27	Platform	13.63	10000	GAR-DEN 1100E	18,000			Blk 376	Working
Ocean Drlg & Expl	Ocean Rover	Semisubmersible	13.65	10000	EMSCO C3 Type 2	25,000	600	600	369-A	Drilling
Penrod Drlg	36	Platform	13.63	10000	NATL 1320UE	30,000	300	172	Blk 571	Drilling
Pool Offshore	458	Platform	13.63	5000	OIME 1500	16,000			Blk 368	Working
	6	Platform	10.00	5000	NATL T45	7000			Blk 342	Working-Exxon
Salen Protexa Drlg	Salenergy III	Platform	13.63	10000	M-CSCO U1220EB	25,000			Blk 389	Drilling
	Salenergy V	Jackup	13.63	10000	M-CSCO U1220BE	20,000	250		Blk 24	Drilling
	Zapoteca	Jackup	13.63	10000	M-CSCO U1220BE	20,000	250		Blk 461	Drilling
Teledyne Movible Offshore	17	Jackup	13.63	10000	EMSCO 1C3	25,000	250		Blk 58-L	Stacked
	4	Platform	13.63	5000	NATL 110UE	16,000			Blk 596-A	Drilling
Transworld Drlg	69	Submersible	13.63	10000	OILWELL E3000	25,000	100	55	Blk A-171	Drilling
Western Oceanic	Western Triton II	Jackup	13.63	10000	NATL 1320	20,000	250		Blk 775	Drilling

			BOP Stack				Water Depth			
Contractor	Rig name or no.	Type	Size (ID)	Pressure rating	Drwwks make & model	Rated drlg depth with 4½ in. pipe	Rated	Current	Location	Status
UNITED STATES (Cont'd)										
TEXAS-HOUSTON										
Dixilyn-Field Drlg	76	Submersible	13.63	5000	BRWSTR N12A	20,000	80	80		Available
	77	Submersible	13.63	10000	NATL 1625DE	30,000	85			Under Construction-Available
Skinner Marine Operations	Skinmar II	Platform	13.63	5000	OILWELL E2000	20,000	185			Stacked
	Skinmar III	Platform	13.63	5000	OILWELL E2000	20,000	185			Stacked
TEXAS-LAVACA BAY										
Matagorda Marine Drlg	Barge 1	Barge	10.00	5000	WLSN M90		9		S/T 26-4	
	Barge 2	Barge	10.00	3000	EMSCO D2	9,500	9		S/T 23A-1	Drilling
TEXAS-MATAGORDA										
Cactus Intl	162	Platform	13.63	5000	EMSCO A1500	25,000		125	Blk 703	Operating-Arco
Griffin-Alexander Drlg	G-A III	Jackup	13.63	10000	UNIT EB1200	25,000	250		Blk 654-#1	Drilling-Cities Service
Marine Drlg	J Storm VIII	Jackup	13.63	10000	NATL 1320	20,000	150	121	Blk 624	Drilling-Committed
	Stormdrill V	Jackup	13.63	10000	NATL 130	20,000	115	43	S/T 596-L	Drilling-Committed
Zapata Offshore	Endeavour	Jackup	13.63	10000	EMSCO CE3000E	20,000	215	55		Drilling
	Rig 30	Self-Cont Platform			M-CSCO U1220EB			92	Blk 200	Drilling
TEXAS-MATAGORDA BAY										
Matagorda Marine Drlg	Barge 4	Barge	10.00	3000	NATL 610	12,000	8		S/T 69-1	Drilling
	3	Barge	10.00	3000	BRWSTR N45	8,000	9		S/T 308-3	Drilling
TEXAS-MATAGORDA ISLAND										
Global Marine Drlg	Glomar High Island III	Jackup	13.63	10000	NATL 1320UE	20,000	250	250	Blk 668	Drilling
Houston Offshore Intl	Nueces I	Jackup	13.63	10000	NATL 1320UE	16,000	115		Blk 724	Available
Keydril	Key Manhattan	Jackup	13.63	10000	NATL 1625	25,000	300			Drilling
Keyes Offshore	Keyes - 300	Jackup	13.63	10000	EMSCO CII	20,000	300	60	Blk 652	Drilling
Marlin Drlg	Marlin 4	Jackup	13.63	10000	NATL 1625DE	25,000	150		Blk 697	Drilling
Ocean Drlg & Expl	Ocean King	Jackup	13.63	10000	NATL 1625	25,000	300	300	Blk 634	Drilling
Service Equipment & Engrg	14								Blk 701-A	Drilling
	21	Platform	13.63	1000	IDECO 2100	2500			Blk 623	Drilling
	3	Platform	10.00		CABOT/FRANKS 1287				Blk 632-A	Workover
TEXAS-MUSTANG ISLAND										
Atwood Oceanics	Vicksburg	Jackup	13.63	10000	EMSCO C2	20,000	300	204	OCSG 4 Blk A-60	Drilling
Broughton Drlg	Broughton I	Jackup	13.63	10000	OILWELL E3000	30,000	105	72	Blk 724	Available
	Broughton II	Jackup	13.63	10000	OILWELL E3000	30,000	105	75	Blk 897-S	Term Contract
Chiles Drlg	Yucatan	Jackup	13.63	10000	NATL 1625DE	30,000	300		Blk 117-A	Drilling
JFP Well Serv	JFP Five	Jackup	13.63	10.00	OILWELL E2000	25,000	300		Blk 797	Working On Location
Marine Drlg	J Storm I	Jackup	13.63	10000	NATL 130	20,000	225	125	Blk 879-L	Drilling-Committed
	J Storm IV	Jackup	13.63	10000	NATL 1625M	25,000	250	57	Blk 831	Waiting On Location
Nicklos Drlg	81	Self-Cont Platform			NATL 1320UE	20,000			Blk A-11	Drilling
Ocean Drlg & Expl	Ocean Scout	Semisubmersible	13.63	10000	EMSCO C3 Type 2	25,000	600	600	Blk 121-A	Drilling
Penrod Drlg	68	Jackup	13.63	10000	NATL 1625DE	30,000	330	57	Blk A-152	Drilling
Pool Offshore	454	Platform	13.63	10000	OIME 1500	16,000			Platform B	Working-Exxon
TEXAS-NUECES										
Dixilyn-Field Drlg	Barge 51	Barge	10.00	5000	NATL 110		10		S/T 470	Drilling
	50	Barge	10.00	5000	NATL 130	25,000	8		State Tract H#1	Drilling
TEXAS-PORT ARTHUR										
Marlin Drlg	Marlin 3	Jackup	13.63	10000	NATL 1625DE	25,000	250			Shipyard For Repairs
TEXAS-SABINE LAKE										
Whalen Drlg	2	Barge	13.63	10000	NATL 1625DE	30,000	20	8		Drilling
TEXAS-SABINE PASS										
Booker Drlg	15	Platform	10.00	5000	GAR-DEN 3000				Blk 18	W/O
Houston Offshore Intl	Sabine II	Jackup	13.63	10000	NATL 1320UE	20,000	200			Available
	Sabine III	Jackup	13.63	10000	NATL 1320UE	20,000	200			Available
Marine Drlg	J Storm XVIII	Jackup	13.63	10000	NATL 1320M	20,000	250			Committed-Rigging Up
Marlin Drlg	Marlin #9	Platform	11.00	10000	NATL 610E	10,000			Blk 13 C	Drilling
	Marlin No 6	Jackup	13.63	10000	NATL 1625DE	30,000	300			Stacked
Phoenix Management	Big Foot Two	Jackup	10.63	10000	GAR-DEN 2100E	25,000	85		Blk 255	Stacked
Teledyne Movible Offshore	Rig 20	Jackup	13.63	10000	EMSCO C3	25,000	250			Stacked
TEXAS-SOUTH PADRE ISLAND										
Marine Drlg	J Storm VI	Jackup	13.63	10000	NATL 1625M	25,000	250	91	Blk 1126-L	Drilling-Committed
TEXAS-SOUTH PASS										
Helmerich & Payne Intl Drlg	90	Platform	13.63	5000	OILWELL E2000	20,000		185	Blk 60-D	
	91	Platform	13.63	5000	OILWELL 2000	20,000		205	Blk 60-E	
TEXAS-TRINITY BAY										
Matagorda Marine Drlg	6	Barge	10.00	3000	EMSCO GC500	12,000	10		S/T 74-1	Workover Operation
VIRGINIA-UNDESIGNATED										
Associated Marine Serv	Heron	Drillship			HOWARD-TURNER	1,500	700	600		Drilling
WASHINGTON-KING										
Associated Marine Serv	La Ciencia	Drillship			HOWARD-TURNER	1,500	600	600		Drilling
WEST INDIES										
TRINIDAD										
Dolphin Titan Intl	130	Platform	13.63	10000	GAR-DEN 2100E	25,000				Undergoing Modifications
Pool Santana	Rig #418-Offshore	Platform	10.00	5000	OIME	6,000			Off Galeota Point	Working
Rowan Co	Rowan Fort Worth	Jackup	13.63	10000	NATL 1625	25,000	300		Well #532	Drilling
Santa Fe Drlg	Bluewater No 3	Semisubmersible	16.75	10000	NATL 1625DE	25,000	600			Idle
Skinner Marine Operations	Skinmar VII	Platform	13.63	5000	OILWELL 840E	16,000		100	Platform 24-Trinmar	Rigging Up
	Skinmar 1	Platform	13.63	10000	OILWELL E2000	20,000	185		Amoco Platform Teak D	Drilling
	Skinmar 4	Platform	13.63	5000	OILWELL 840E	16,000				Stacked
	Skinmar 5	Platform	13.63	5000	OILWELL 760	12,000	88		Platform 23-Trinmar	Drilling
	Skinmar 6	Platform							East Coast	En Route
Well Services	10				NATL C125	14,000			Woodbour	Drilling
	6	Platform	13.63	6000	NATL 80B	12,000		80	Soldado	Drilling
	7	Platform	13.63	6000	BRWSTR 4210	8,000	85	80	Galeota	Drilling

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ANNUAL DEEP WELL REPORT

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ABOUT THE COVER: Penrod Drilling Co.'s Rig 121 drills Hunt Energy Corp.'s Cerf Ranch No. 1-9 well in Pecos County, Texas, to a state-record total depth of 29,670 ft. (Photo by Randy Morton, Grant Corp.)

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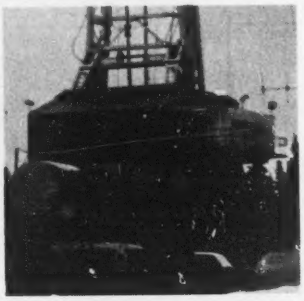

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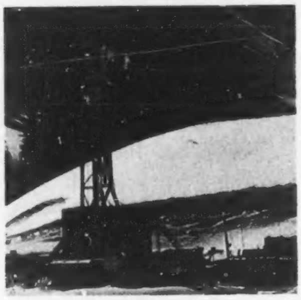

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21 **U.S. Drillers Complete 1,205 Deep Wells In 1982**

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State-by-state data on last year's 1,205 deep U.S. wells, including historical trends in average depths, costs, bits, and expenditures for drilling fluids, plus a complete listing of the country's 242 deep well operators.

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Petroleum Engineer® INTERNATIONAL

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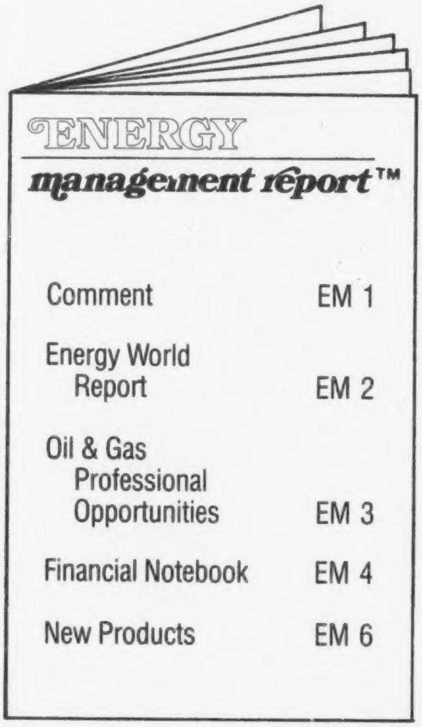

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Early Rig Activity Evidences A Return To Normalcy

U.S. drillers began February this year with the lowest weekly total since Oct. 8, 1979, when the rig count was 2,336. On Feb. 7, 1983, the count had come full circle, and stood at 2,335. In the meantime, on Jan. 4, 1982, the count reached its all-time high of 4,467.

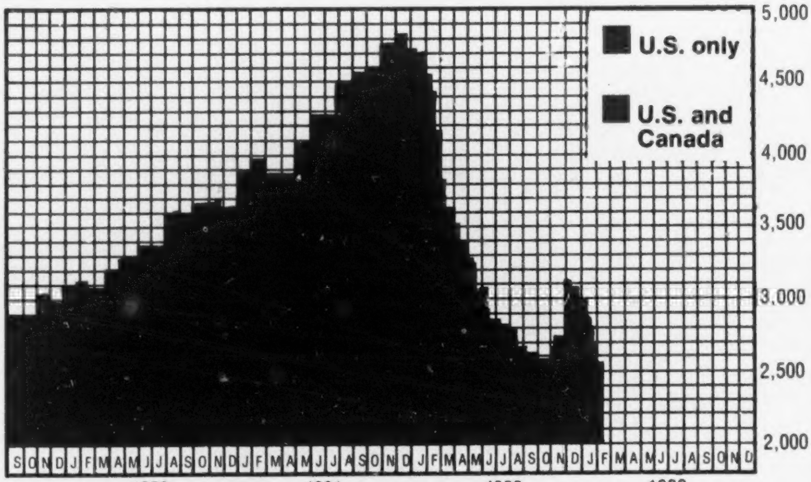
If the count has, indeed, reached full circle the early downturn in 1983 could be a return to traditional patterns in which the rig count falls early in the year – due, at least in part, to wintry weather – and then picks up strength throughout the remainder of the year.

If that turns out to be the case during 1983, and there are those who think that it will, then the year could become quite a respectable one after all – as far as drilling is concerned. Average rig efficiency increased during last year's hard times, and competition among drilling contractors is becoming intense.

Rotary Rigs Actually Making Hole In United States & Canada

As Reported To International Association Of Drilling Contractors By Hughes Tool Co.

	Jan. 17, 1983	Jan. 24, 1983	Jan. 31, 1983	Feb. 7, 1983
Alabama				
Land	14	11	13	18
Inland Waters	5	5	5	4
Alaska				
Land	14	14	13	12
Offshore	2	2	1	1
Total	16	16	14	13
Arkansas	25	31	31	34
Arizona	1	1	0	0
California				
Land	94	82	75	66
Offshore	20	21	24	26
Total	114	103	99	92
Colorado	59	45	47	43
Florida	4	3	2	2
Hawaii	1	1	1	1
Idaho	1	1	1	1
Illinois	49	43	52	46
Indiana	6	8	10	9
Kansas	143	143	142	137
Kentucky	4	3	3	3
North Louisiana	46	48	44	38
South Louisiana				
Inland Waters	60	53	53	55
Land	98	90	90	89
Offshore	136	135	138	137
Total	340	326	325	319
Michigan	38	36	34	35
Mississippi	38	39	36	34
Montana	29	27	25	26
Nebraska	9	11	11	10
Nevada	1	1	1	1
New Mexico	94	81	76	69
New York	19	15	17	14
North Dakota	41	38	43	40
Ohio	67	66	67	44
Oklahoma	368	358	336	311
Pennsylvania	27	32	34	32
South Dakota	1	1	0	0
Tennessee	1	1	1	1
Texas				
Offshore	64	64	59	54
Inland Waters	8	8	7	7
Dist. 1-S. Central Tex.	27	23	22	19
Dist. 2-Middle Tex. Coast	48	43	44	35
Dist. 3-Upper Tex. Coast	121	122	113	104
Dist. 4-Lower Tex. Coast	105	106	98	102
Dist. 5-Northeast Tex.	18	26	26	27
Dist. 6-Far Northeast Tex.	88	91	98	95
Dist. 7B-North Central Tex.	65	62	55	56
Dist. 7C-West Central Tex.	68	77	66	72
Dist. 8-Far West Tex.	109	102	97	98
Dist. 8A-West Tex.	63	59	51	49
Dist. 9-North Tex.	74	74	74	73
Dist. 10-Tex. Panhandle	53	55	43	43
Total	911	912	853	834
Utah	41	28	42	41
Virginia	2	2	2	3
Washington	0	0	0	1
West Virginia	57	42	43	37
Wyoming	110	108	90	80
Total U.S.	2,636	2,538	2,456	2,335
Canada				
Land	246	241	215	206
Offshore	6	8	8	8
U.S. and Canada	2,888	2,787	2,679	2,549



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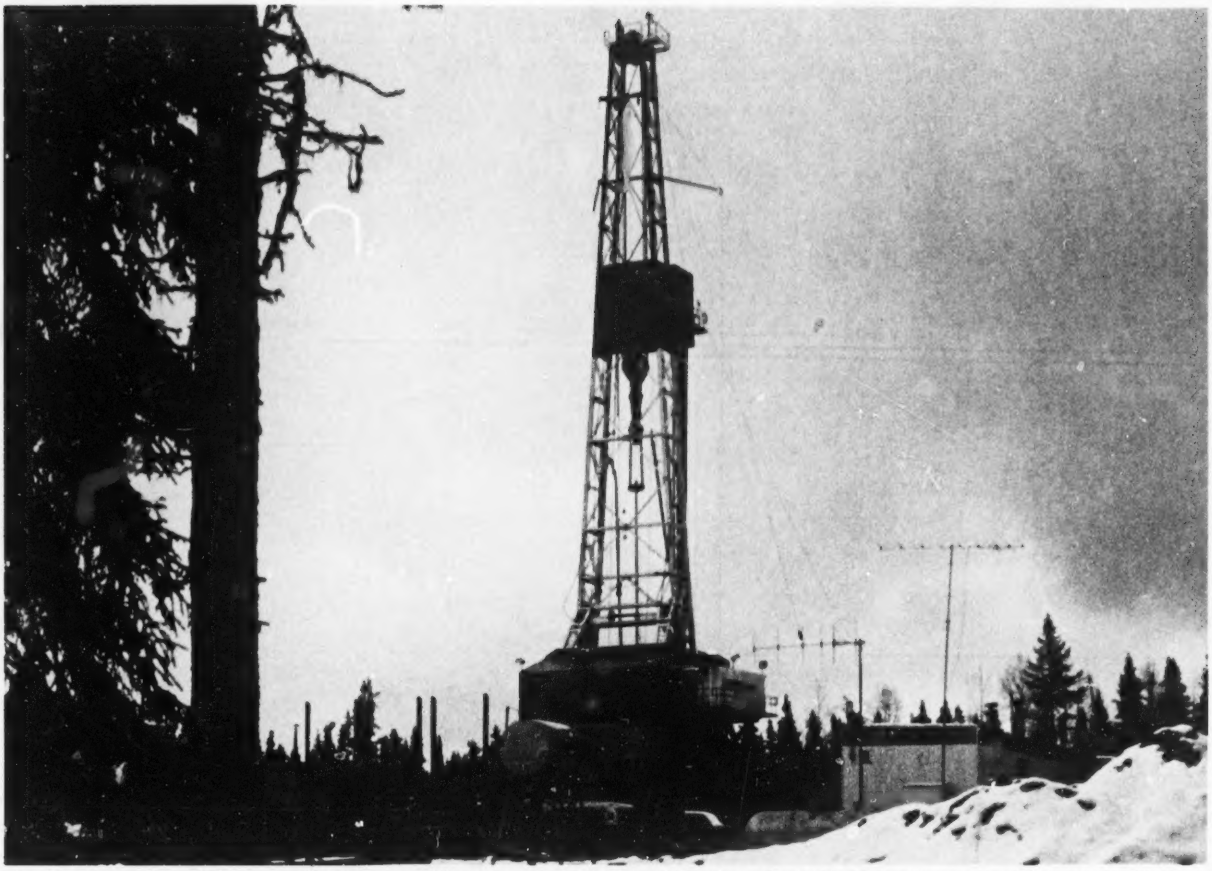


The deepest well in the history of Idaho was drilled last year by Loffland Brothers Co.'s Rig 89 for Exxon Co. USA, whose Meyers Federal No. 1 wildcat touched down at 18,540 ft.

U.S. Drillers Complete 1,205 Deep Wells In 1982

by Rich McNally, *Associate Editor*, and Mary Jane Ellis, *Assistant Editor*

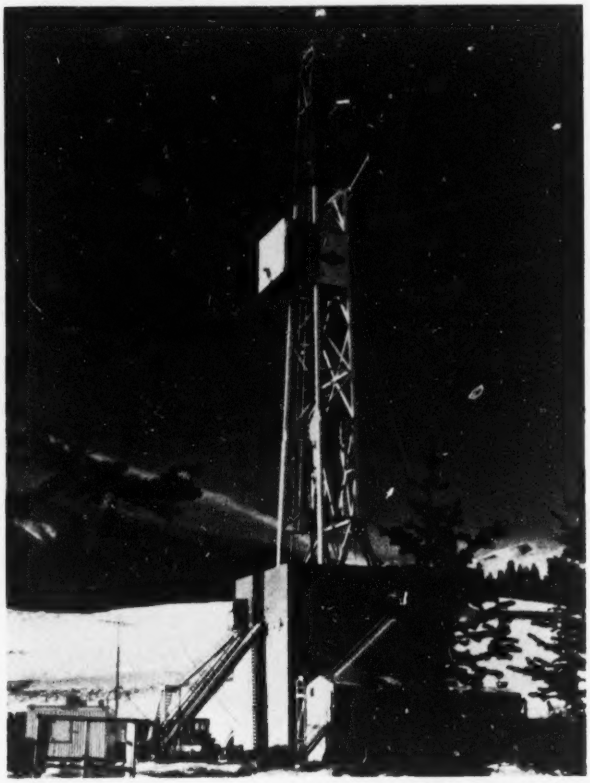
Deep drillers in the U.S. completed a record total of 1,205 wells drilled to 15,000 ft or deeper last year, topping by 139 wells the former record of 1,066 deep wells set in 1981. That is a 13% increase, and it marks the seventh year in a row in which the deep well count increased over the previous year.

Although none of last year's 1,205 deep wells surpassed the nation's depth record of 31,441 ft, set in 1974 in Washita County, Oklahoma, a number of state depth records fell during the year. In Alabama, for example, Mobil Oil Exploration and Producing Co. drilled a 21,859-ft discovery well last year in Mobile Bay, some 27 miles south of Mobile, to break the state's old record by 746 ft. And it topped the record for the deepest producing well in the state by 933 ft.

In Idaho, the Meyers Federal No. 1 well drilled for Exxon Co. USA in Clark County reached total depth at 18,540 ft to beat the previous Idaho depth record by 1,790 ft. Both wells are dry holes, as are all wells drilled so far in Idaho.

Another state record turned up by PETROLEUM ENGINEER INTERNATIONAL's annual Deep Well Report is in Utah, where Texaco USA's No. 1 Thousand Peaks Ranch wildcat in Summit County went to 21,874 ft. The previous record for that state, set in 1980, was 21,845 ft.

In Texas, Hunt Energy Corp.'s No. 1-9 Cerf Ranch in Pecos County not only set a new record for the Lone Star State, but it also is the deepest well of 1982. Drilled to 29,670 ft, the well outdistanced the previous



A new Utah depth record was set last year when one of the highest wildcats in the U.S. was drilled for Texaco USA to a total depth of 21,874 ft at the Thousand Peaks Ranch in Summit County. Drilled by Bawden Drilling's Rig 14, the well was spudded 10,000 ft above sea level.

record holder, Gulf Oil Co.'s No. 2-1 Emma Lou Unit, also in Pecos County, by 48 ft. The Hunt well is dry, however, while Gulf's well has been plugged back to produce gas from an interval between 21,546 and 23,381 ft.

For the purposes of the annual Deep Well Report, completions are defined as wells that reached total depth of 15,000 ft or more during the year, regardless of whether production equipment has been installed. Some of the wells listed as dry, therefore, are still being tested at this writing. As a result, their classifications as dry holes or producers could change when final test results are known.

Sooners Out Front

Oklahoma moved way out ahead of all other states last year with 493 deep completions, almost 200 more than the perennial leader, Louisiana. Texas was in third place with 210 – 16 of them offshore. Some 75 of Louisiana's 297 deep wells last year were offshore wells, and the two states (Louisiana and Texas) accounted for 95% of all offshore deep wells.

Oklahoma's big increase, from 279 in 1981 to 493 last year, is directly traceable to the prolific Anadarko Basin, which some say contains as much as 200 tcf of natural gas. At the beginning of last year, more than 600 rigs (about 20% of the active U.S. rig fleet) were at work in the basin. By year-end, however, a soft gas

Location of 1982 wells 15,000 ft and deeper

	Wells	Average bits/well	Average cost/well	Average mud cost/well
Alabama*	29	25.0	$ 5,633,586	$ 447,862
Alaska	2	61.0	28,100,000	1,506,000
Arkansas	1	53.0	3,600,000	506,000
California	4	53.0	9,160,250	1,010,750
Florida*	8	25.0	6,004,375	421,125
Idaho	2	75.5	14,031,500	811,000
Louisiana*	297	33.5	7,433,506	679,690
Massachusetts	2	38.5	30,000,000	795,000
Mississippi	69	24.5	3,525,058	295,000
Nevada	1	43.0	8,200,000	400,000
New Mexico	28	22.0	3,292,821	268,286
North Dakota	1	19.0	2,656,000	138,000
Oklahoma	493	39.4	6,193,280	505,412
Pennsylvania	1	85.0	21,686,000	1,535,000
Texas*	210	34.8	6,601,671	600,567
Utah	14	87.1	10,241,785	840,286
Wyoming	43	70.5	10,300,302	920,930

*Includes offshore

TABLE 1. U.S. deep drilling
All wells drilled to 15,000 ft or deeper

		1982 (1,205 wells)	1981 (1,066 wells)	1980 (859 wells)
Average well depth		17,354 ft	17,114 ft	17,178 ft
Average cost/well		$6,637 ($382.45/ft)	$5,467 ($313.01/ft)	$4,560 ($265.47/ft)
Average mud cost/well		$569 ($32.79/ft)	$527 ($32.50/ft)	$479 ($27.88/ft)
Average bits/well		37.2 (466 ft/bit)	34.6 (500 ft/bit)	31.6 (544 ft/bit)
Success ratio		49.8%	56.1%	53.8%
Wildcat success ratio		34.1% (536 wells)	46.6% (530 wells)	39.3% (433 wells)
Development success ratio		62.3% (669 wells)	66.5% (536 wells)	68.5% (426 wells)
Total costs:	Mud	$685,589	$561,396	$411,380
	Drilling	$6,659,255	$4,851,856	$3,266,302
	Completion	$1,118,354	$920,532	$539,843
	Total	$7,997,571	$5,828,219	$3,917,118
	Total footage	20,911,440	18,243,075	14,755,480

(Costs in thousand dollars except dollars per foot)

TABLE 2. Alabama land deep drilling
All wells drilled to 15,000 ft or deeper

		1982 (27 wells)	1981 (27 wells)	1980 (26 wells)
Average well depth		16,854 ft	16,903 ft	17,475 ft
Average cost/well		$3,329 ($197.50/ft)	$3,116 ($184.33/ft)	$2,365 ($135.36/ft)
Average mud cost/well		$337 ($20.02/ft)	$262 ($15.52/ft)	$185 ($10.56/ft)
Average bits/well		19.0 (887 ft/bit)	17.2 (981 ft/bit)	18.7 (933 ft/bit)
Success ratio		51.9%	40.7%	30.8%
Wildcat success ratio		11.1% (9 wells)	28.6% (7 wells)	16.7% (12 wells)
Development success ratio		72.2% (18 wells)	45% (20 wells)	42.9% (14 wells)
Total costs:	Mud	$9,109	$7,081	$4,800
	Drilling	$70,907	$71,381	$50,106
	Completion	$18,967	$12,745	$10,533
	Total	$89,874	$84,126	$61,500
	Total footage	455,059	456,394	454,359

(Costs in thousand dollars except dollars per foot)

Wells completed 15,000 ft and below by years of completion

Year	No. wells by date of completion	Explor-atory	Total producers	Average bits/well	Mud costs average	Well costs average	Average cost/ft	Total footage drilled	Average ft/well	New records Deepest well	New records Deepest producer
1938	1	1	1	—	—	—	—	15,004	—	15,004	13,175
1944	1	1	0	—	—	—	—	15,279	—	15,279	—
1945	3	3	0	222	—	—	—	47,245	15,748	16,655	—
1946	1	1	1	—	—	—	—	15,452	—	—	—
1947	8	8	1	181	$ 24,000	$ 570,000	$ 35.87	127,128	15,891	17,823	13,904
1948	7	6	2	303	28,000	551,000	34.34	112,329	16,047	—	14,255
1949	11	8	5	199	64,000	534,000	32.52	180,631	16,421	20,521	15,530
1950	5	2	3	181	63,000	557,000	36.72	78,565	15,713	—	—
1951	12	5	6	116	54,000	527,000	33.56	189,864	15,822	—	—
1952	25	17	9	138	66,000	549,000	34.77	396,850	15,874	—	16,012
1953	25	14	20	159	75,000	729,000	44.79	402,936	16,177	21,482	17,895
1954	56	30	31	117	92,000	651,000	40.87	892,021	15,929	—	—
1955	80	63	43	87	116,000	649,000	40.09	1,276,560	15,957	22,559	—
1956	155	77	78	89	122,000	683,000	42.18	2,510,050	15,988	—	20,745
1957	185	114	89	89	121,000	743,000	46.25	2,987,841	16,064	—	—
1958	197	136	100	79	107,000	692,000	43.18	3,171,762	16,019	—	—
1959	228	142	119	71	83,000	650,000	40.48	3,660,857	16,056	25,340	—
1960	242	134	136	66	86,000	675,000	42.50	3,858,622	15,945	—	—
1961	243	84	153	63	81,000	614,000	38.07	3,918,324	16,124	—	—
1962	254	74	130	63	92,000	654,000	38.00	4,414,300	17,000	—	—
1963	271	96	128	52	97,246	696,000	42.85	4,401,363	16,241	—	21,410
1964	308	141	150	51	95,507	653,256	39.33	5,115,938	16,610	—	21,793
1965	330	117	156	59	90,160	610,784	36.50	5,522,541	16,735	—	22,098
1966	388	130	149	71	84,007	727,996	42.20	6,693,785	17,252	—	22,483
1967	402	142	192	66.8	96,375	762,676	45.29	6,769,371	16,839	—	—
1968	406	150	194	65	100,305	689,991	52.13	6,931,232	17,072	—	22,790
1969	389	116	206	53.6	101,529	866,349	50.91	6,619,216	17,016	—	—
1970	381	168	189	53.7	117,874	999,343	57.87	6,579,870	17,270	25,600	—
1971	417	149	210	60.3	146,049	949,959	54.81	7,227,444	17,332	—	—
1972	506	230	290	43.6	103,507	919,484	54.21	8,583,278	16,963	30,050	22,548
1973	506	213	272	37.7	122,067	1,107,059	63.58	8,810,918	17,413	—	—
1974	446	220	258	36.9	168,426	1,456,522	84.08	7,726,058	17,323	31,441*	—
1975	410	191	190	37	197,279	1,901,017	109.80	7,098,330	17,313	—	—
1976	439	186	255	32.8	214,276	2,112,509	121.98	7,603,041	17,319	—	—
1977	476	233	233	30.4	221,490	2,205,954	127.58	8,230,040	17,290	—	26,566**
1978	604	306	288	29.2	253,082	2,577,216	150.60	10,352,560	17,140	—	—
1979	621	248	279	29.7	414,000	3,599,000	208.68	10,709,644	17,246	—	—
1980	859	433	462	31.6	478,906	4,560,090	265.47	14,755,480	17,178	—	—
1981	1,066	530	598	34.6	526,638	5,467,372	313.01	18,243,075	17,114	—	—
1982	**1,205**	**536**	**600**	**37.3**	**$568,954**	**$6,636,988**	**$382.45**	**20,911,440**	**17,354**	—	—

*This is the all-time record depth hole, completed in Oklahoma's Anadarko Basin in May 1974 by Lone Star Producing Co.

**Chevron USA established the record depth production mark in 1977 with completion of No. 1 Ledbetter in Wheeler County, Texas. Gage was 2,500,000 cfd from the Arbuckle at 23,427-26,518 ft.

market coupled with the high costs of Anadarko drilling had put a definite damper on deep drilling in the region.

Although Oklahoma's deep drilling costs were close to the average for all U.S. deep drilling last year, they registered a steep climb over 1981 when they went from an average of $4.7 million per well to $6.2 million. That is a 31% increase compared with the country's overall increase of 21% in average deep drilling costs.

In all, operators last year spent more than $7 billion to drill the 1,205 deep wells. Total footage drilled came to 20.9 million, which adds up to $382.45/ft.

For that, the operators were rewarded with 600 deep producers, for a success ratio just under 50%. Broken down, 183 of the successful wells were wildcats, which had a 34.1% success ratio, and 417 of them were development wells, for which the success ratio was 62.3%.

Of states with more than one or two deep wells during the year, New Mexico had the best success ratio, with 17 out of 28 wells listed as producers. Oklahoma's success ratio is pretty good, also, with 290 of the state's 493 deep wells finding oil or gas.

In all, 17 states were involved in deep drilling last year, and one, Massachusetts, is a newcomer to the Deep Well Report, thanks to a couple of offshore wells drilled on Georges Bank.

As indicated earlier, Oklahoma was the leading deep-well state in 1982, with Louisiana and Texas finishing second and third. Other states with more than a handful of deep wells are Mississippi, with 69, Wyoming, 43, New Mexico, 28, Alabama, 29, and Utah, with 14. Of these states, Utah and Wyoming are by far the most expensive states in which to drill deep. Overthrust wells in the two states cost more than $10 million apiece, which is close to $600/ft. The Overthrust success ratio (for development wells, at least) is pretty good, however.

Bit Usage Climbs

Bit usage continued to climb in 1982 after having been reduced by half during the 1970s. The average

TABLE 3. Alabama offshore deep drilling
All wells drilled to 15,000 ft or deeper

	1982 (2 wells)	1981 (0 wells)	1980 (0 wells)
Average well depth	21,404 ft	0	0
Average cost/well	$36,750 ($1,716/ft)	0	0
Average mud cost/well	$1,940 ($90.61/ft)	0	0
Average bits/well	106.5 (201 ft/bit)	0	0
Success ratio	100%	0	0
Wildcat success ratio	0% (0 wells)	0	0
Development success ratio	100% (2 wells)	0	0
Total costs: Mud	$3,879		
Drilling	$66,173		
Completion	$7,327		
Total	$73,500		
Total footage	42,808		

(Costs in thousand dollars except dollars per foot)

TABLE 4. Alaska deep drilling
All wells drilled to 15,000 ft or deeper

	1982 (2 wells)	1981 (0 wells)	1980 (5 wells)
Average well depth	15,575 ft	0	16,700 ft
Average cost/well	$28,100 ($1,804/ft)	0	$26,556 ($1,590/ft)
Average mud cost/well	$1,506 ($96.69/ft)	0	$1,003 ($60.08/ft)
Average bits/well	61 (255 ft/bit)	0	89.4 (187 ft/bit)
Success ratio	50%	0	0%
Wildcat success ratio	0% (1 well)	0	0% (5 wells)
Development success ratio	100% (1 well)	0	0% (0 wells)
Total costs: Mud	$3,012		$5,017
Drilling	$53,100		$121,098
Completion	$3,100		$8,412
Total	$56,200		$132,778
Total footage	31,150		63,501

(Costs in thousand dollars except dollars per foot)

number of bits used per deep well in 1971 was 60.3. By 1979, the number had dropped to 29.7. So far in the '80s, however, the average number of bits per deep well has been on the increase. Last year, it reached 37.3 but, thanks to the year's second deepest average well depth in history, footage per bit decreased by only 5.6%. Only 1973's average well depth of 17,413 ft topped the 1982 average of 17,354 ft.

Mud costs have been on a steady rise during the past 10 years, with the average last year reaching $569,000 per deep well. That was an increase of some $40,000 over the 1981 average, but costs per foot remained close – $32.50 in 1981 and $32.79 in 1982.

536 Deep Wildcats

The 536 deep wildcat wells drilled in the U.S. last year had an average total depth of 17,643 ft – almost 300 ft deeper than the average for all deep wells. Average cost per foot for wildcats was $420.64, which was 10% higher than the overall costs. Bit usage for wildcat wells was up also – 40.4 bits/well for wildcats, compared with 37.3 bits/well for both wildcats and development wells.

Louisiana was the most popular state for deep wildcats, with 157 of them completed there last year – 35 of them offshore, in the Gulf of Mexico. Texas drillers completed 11 deep offshore wildcats in the Gulf, and drillers offshore Alabama and Florida put down three. Outside the Gulf of Mexico, the only other deep wildcats were drilled offshore Massachusetts, on Georges Bank. That's frontier territory, as attested to by the average price tag of $30 million per well. Deep wildcats in the Gulf were expensive, also, but not nearly as costly as North Atlantic wells.

The 35 deep wildcats drilled offshore Louisiana cost an average of $10 million each – about $600,000 per well higher than overall deep drilling off Louisiana. Offshore Texas, 11 deep wildcats cost $14 million apiece – about $1 million more than all deep wells in that area. The wildcat offshore Florida marked a return to the Destin Dome area that disappointed the industry a few years ago. It still is disappointing, but this time the disappointment was in the $20 million range.

Onshore, Louisiana wildcatters continued their search for the prolific Tuscaloosa Trend, which has seen 400 wells drilled to an average total depth of 19,000 ft since its discovery by Chevron USA in 1975. So far, 20 fields have been discovered on the trend, which extends from southern Mississippi, across south Louisiana, and into south central Texas. Even with all the drilling since 1975, however, the Tuscaloosa can still be called a frontier area. Frank Harrison, an independent geologist from Lafayette, La., and a former president of the American Association of Petroleum Geologists, was quoted in ENERGY NEWS recently as saying that only the shallower deposits of the trend have been tapped so far. He thinks production below 25,000 ft is not only possible but probable.

49 Texas Counties

With the Tuscaloosa Trend extending into south Texas, the Anadarko Basin underlying parts of the Texas Panhandle, and the Permian and Delaware Basins in West Texas, deep drillers in that state could be found almost everywhere last year. And they were, in fact, found in 49 Texas counties, as well as in five offshore sectors. The 194 deep wells they completed on land had an average total depth of 17,580 ft, and the 16 offshore deep wells went to an average of 16,519 ft.

Some 96 out of the 194 deep Texas land wells were successful last year, while only one of the 16 offshore wells was commercial.

Alabama deep drillers have been marvels of consistency for the past 5 years with onshore completion totals since 1977 of 25, 25, 26, 27, and 27. Well costs in 1977 averaged $1.8 million, and that average now is up to $3.3 million. But, they can't say it hasn't been worthwhile. Of the 130 deep wells drilled in Alabama during those years, 55 of them proved to be commercial. Last year was best of all, with 14 successful wells.

Whether Alabama, or any other state, will be able to keep up the good work during the next few years is the

TABLE 5. Arkansas deep drilling
All wells drilled to 15,000 ft or deeper

	1982 (1 well)	1981 (2 wells)	1980 (0 wells)
Average well depth	15,106 ft	15,620 ft	0
Average cost/well	$3,600 ($238.32/ft)	$2,769 ($177.25/ft)	0
Average mud cost/well	$506 ($33.50/ft)	$134 ($8.55/ft)	0
Average bits/well	53 (285 ft/bit)	37.5 (417 ft/bit)	0
Success ratio	100%	0%	0
Wildcat success ratio	100% (1 well)	0% (1 well)	0
Development success ratio	0% (0 wells)	0% (1 well)	0
Total costs: Mud	$506	$267	
Drilling	$3,350	$5,409	
Completion	$250	$128	
Total	$3,600	$5,537	
Total footage	15,106	31,239	

(Costs in thousand dollars except dollars per foot)

TABLE 6. California deep drilling
All wells drilled to 15,000 ft or deeper

	1982 (4 wells)	1981 (5 wells)	1980 (6 wells)
Average well depth	15,725 ft	15,992 ft	16,515 ft
Average cost/well	$9,160 ($582.55/ft)	$3,920 ($245.12/ft)	$3,105 ($188.01/ft)
Average mud cost/well	$1,011 ($64.28/ft)	$367 ($22.95/ft)	$468 ($28.36/ft)
Average bits/well	53 (297 ft/bit)	51.4 (311 ft/bit)	61 (269 ft/bit)
Success ratio	50%	0%	0%
Wildcat success ratio	50% (4 wells)	0% (5 wells)	0% (6 wells)
Development success ratio	0% (0 wells)	0% (0 wells)	0% (0 wells)
Total costs: Mud	$4,043	$1,835	$2,810
Drilling	$27,249	$16,825	$18,285
Completion	$9,391	$2,775	$151
Total	$36,641	$19,600	$18,630
Total footage	62,898	79,960	99,091

(Costs in thousand dollars except dollars per foot)

TABLE 7. Florida land deep drilling
All wells drilled to 15,000 ft or deeper

	1982 (7 wells)	1981 (7 wells)	1980 (4 wells)
Average well depth	15,908 ft	16,160 ft	16,043 ft
Average cost/well	$3,561 ($223.83/ft)	$3,499 ($216.54/ft)	$3,127 ($194.91/ft)
Average mud cost/well	$185 ($11.64/ft)	$199 ($12.29/ft)	$206 ($12.86/ft)
Average bits/well	16.6 (960 ft/bit)	17.1 (943 ft/bit)	15 (1,070 ft/bit)
Success ratio	57.1%	71.4%	100%
Wildcat success ratio	0% (2 wells)	0% (2 wells)	0% (0 wells)
Development success ratio	80% (5 wells)	100% (5 wells)	100% (4 wells)
Total costs: Mud	$1,296	$1,390	$825
Drilling	$23,275	$22,142	$9,671
Completion	$1,650	$2,352	$2,837
Total	$24,925	$24,494	$12,508
Total footage	111,358	113,117	64,173

(Costs in thousand dollars except dollars per foot)

TABLE 8. Florida offshore deep drilling
All wells drilled to 15,000 ft or deeper

	1982 (1 well)	1981 (0 wells)	1980 (0 wells)
Average well depth	21,068 ft	0	0
Average cost/well	$23,110 ($1,096/ft)	0	0
Average mud cost/well	$2,073 ($98.40/ft)	0	0
Average bits/well	84 (251 ft/bit)	0	0
Success ratio	0%	0	0
Wildcat success ratio	0% (1 well)	0	0
Development success ratio	0% (0 wells)	0	0
Total costs: Mud	$2,073		
Drilling	$23,110		
Completion	0		
Total	$23,110		
Total footage	2[illegible],068		

(Costs in thousand dollars except dollars per foot)

TABLE 9. Idaho deep drilling
All wells drilled to 15,000 ft or deeper

	1982 (2 wells)	1981 (1 well)	1980 (0 wells)
Average well depth	17,070 ft	15,109 ft	0
Average cost/well	$14,032 ($822/ft)	$8,863 ($586.60/ft)	0
Average mud cost/well	$811 ($47.51/ft)	$850 ($56.26/ft)	0
Average bits/well	75.5 (226 ft/bit)	109 (139 ft/bit)	0
Success ratio	0%	0%	0
Wildcat success ratio	0% (2 wells)	0% (1 well)	0
Development success ratio	0% (0 wells)	0% (0 wells)	0
Total costs: Mud	$1,622	$850	
Drilling	$27,040	$8,790	
Completion	$1,023	$73	
Total	$28,063	$8,863	
Total footage	34,140	15,109	

(Costs in thousand dollars except dollars per foot)

TABLE 10. Louisiana land deep drilling
All wells drilled to 15,000 ft or deeper

	1982 (221 wells)	1981 (243 wells)	1980 (241 wells)
Average well depth	17,316 ft	17,333 ft	17,378 ft
Average cost/well	$6,760 ($390.37/ft)	$6,011 ($346.82/ft)	$4,931 ($283.78/ft)
Average mud cost/well	$675 ($39/ft)	$663 ($38.22/ft)	$636 ($36.60/ft)
Average bits/well	33.5 (517 ft/bit)	33.6 (516 ft/bit)	33.9 (513 ft/bit)
Success ratio	38.5%	42.4%	43.2%
Wildcat success ratio	25.4% (122 wells)	35.1% (151 wells)	26.5% (132 wells)
Development success ratio	54.5% (99 wells)	54.3% (92 wells)	63.3% (109 wells)
Total costs: Mud	$149,258	$160,998	$153,300
Drilling	$1,309,458	$1,233,607	$977,781
Completion	$184,201	$214,272	$190,877
Total	$1,493,867	$1,460,778	$1,888,491
Total footage	3,826,838	4,211,878	4,188,024

(Costs in thousand dollars except dollars per foot)

(Continued)

TABLE 11. Louisiana offshore deep drilling
All wells drilled to 15,000 ft or deeper

		1982 (76 wells)	1981 (81 wells)	1980 (63 wells)
Average well depth		16,638 ft	16,599 ft	16,342 ft
Average cost/well		$9,393 ($564.58/ft)	$8,466 ($510.03/ft)	$6,444 ($394.30/ft)
Average mud cost/well		$692 ($41.61/ft)	$708 ($42.63/ft)	$591 ($36.14/ft)
Average bits/well		33.5 (497 ft/bit)	36.3 (457 ft/bit)	33.3 (491 ft/bit)
Success ratio		40.8%	46.9%	41.3%
Wildcat success ratio		25.7% (35 wells)	29.4% (34 wells)	32.4% (37 wells)
Development success ratio		53.7% (41 wells)	59.6% (47 wells)	53.8% (26 wells)
Total costs:	Mud	$52,610	$57,313	$37,211
	Drilling	$620,302	$607,596	$363,904
	Completion	$92,910	$73,527	$35,169
	Total	$713,885	$685,729	$405,959
	Total footage	1,264,464	1,344,498	1,029,573

(Costs in thousand dollars except dollars per foot)

TABLE 12. Massachusetts offshore deep drilling
All wells drilled to 15,000 ft or deeper

		1982 (2 wells)	1981 (0 wells)	1980 (0 wells)
Average well depth		17,500 ft	0	0
Average cost/well		$30,000 ($1,714/ft)	0	0
Average mud cost/well		$795 ($45.43/ft)	0	0
Average bits/well		38.5 (455 ft/bit)	0	0
Success ratio		0%	0	0
Wildcat success ratio		0% (2 wells)	0	0
Development success ratio		0% (0 wells)	0	0
Total costs:	Mud	$1,590		
	Drilling	$60,000		
	Completion	0		
	Total	$60,000		
	Total footage	34,999		

(Costs in thousand dollars except dollars per foot)

TABLE 13. Mississippi deep drilling
All wells drilled to 15,000 ft or deeper

		1982 (69 wells)	1981 (127 wells)	1980 (113 wells)
Average well depth		17,256 ft	17,210 ft	17,058 ft
Average cost/well		$3,525 ($204.28/ft)	$3,607 ($209.59/ft)	$2,736 ($160.41/ft)
Average mud cost/well		$295 ($17.10/ft)	$340 ($19.74/ft)	$253 ($14.85/ft)
Average bits/well		24.5 (705 ft/bit)	27.4 (628 ft/bit)	23.6 (724 ft/bit)
Success ratio		42%	44.1%	42.5%
Wildcat success ratio		21.1% (33 wells)	25.5% (55 wells)	20.8% (48 wells)
Development success ratio		61.1% (36 wells)	58.3% (72 wells)	58.5% (65 wells)
Total costs:	Mud	$20,355	$43,154	$28,625
	Drilling	$202,698	$381,023	$242,025
	Completion	$40,531	$75,009	$64,421
	Total	$243,229	$458,100	$309,207
	Total footage	1,190,678	2,185,708	1,927,570

(Costs in thousand dollars except dollars per foot)

TABLE 14. Nevada deep drilling
All wells drilled to 15,000 ft or deeper

		1982 (1 well)	1981 (0 wells)	1980 (1 well)
Average well depth		17,110 ft	0	19,562 ft
Average cost/well		$8,200 ($479.25/ft)	0	$6,584 ($350.37/ft)
Average mud cost/well		$400 ($23.38/ft)	0	$449 ($22.95/ft)
Average bits/well		43 (398 ft/bit)	0	41 (477 ft/bit)
Success ratio		0%	0	0%
Wildcat success ratio		0% (1 well)	0	0% (0 wells)
Development success ratio		0% (0 wells)	0	0% (1 well)
Total costs:	Mud	$400		$449
	Drilling	$8,200		$6,854
	Completion	0		0
	Total	$8,200		$6,854
	Total footage	17,110		19,562

(Costs in thousand dollars except dollars per foot)

subject of some concern in drilling circles these days. And part of the problem stems from the fact that deep drillers have done too good a job since the Natural Gas Policy Act of 1978 removed price controls from gas reserves deeper than 15,000 ft. In 1982, for the fourth straight year, the amount of natural gas available to pipelines exceeded consumption in the U.S. Gas that sold for $10/Mcf at the beginning of the year was being offered by $5/Mcf, or lower, by midyear.

Although much of the gas oversupply situation has been caused by economic conditions that have curbed demand for natural gas, another major factor is federal regulations that discourage gas use by utilities and industries.

So, indications are that 1982's record total of 1,205 deep wells will not be threatened for at least a couple of years. A recent survey of Anadarko Basin operators who were responsible for 95% of the deep wells drilled there in 1982 indicates activity in the basin may be off as much as 90% this year. Two dozen operators, who were responsible for 250 deep Anadarko wells in 1982, say they plan to drill fewer than 20 this year.

Increasing gas surpluses, therefore, together with government taxing policies, are expected to put a crimp in deep drilling for the next year or so. It will take an act of Congress to straighten out the tax mess, but it should take only an act of Nature, in the form of a couple of hard winters, to dry up the surpluses.

Note: PETROLEUM ENGINEER INTERNATIONAL has been analyzing deep drilling annually since 1944. Base data are acquired from various industry sources, including contract drilling companies and Petroleum Information Corp., Denver, Colo. Operating companies confirm the wells and, through a special arrangement, provide us with cost data on a confidential basis. Mary Jane Ellis compiled the data for this report, which was written by Rich McNally.

(Continued)

TABLE 15. New Mexico deep drilling
All wells drilled to 15,000 ft or deeper

	1982 (28 wells)	1981 (19 wells)	1980 (15 wells)
Average well depth	15,739 ft	16,149 ft	16,638 ft
Average cost/well	$3,293 ($209.22/ft)	$3,565 ($220.73/ft)	$2,813 ($169.05/ft)
Average mud cost/well	$268 ($17.05/ft)	$295 ($18.25/ft)	$309 ($18.56/ft)
Average bits/well	22 (715 ft/bit)	23.7 (682 ft/bit)	21.5 (775 ft/bit)
Success ratio	60.7%	73.7%	86.7%
Wildcat success ratio	66.7% (18 wells)	66.7% (15 wells)	90.9% (11 wells)
Development success ratio	50% (10 wells)	100% (4 wells)	75% (4 wells)
Total costs: Mud	$7,512	$5,601	$4,631
Drilling	$78,485	$51,440	$34,630
Completion	$13,432	$15,469	$6,396
Total	$92,199	$67,726	$42,191
Total footage	440,685	306,829	249,572

(Costs in thousand dollars except dollars per foot)

TABLE 16. North Dakota deep drilling
All wells drilled to 15,000 ft or deeper

	1982 (1 well)	1981 (1 well)	1980 (0 wells)
Average well depth	15,000 ft	15,059 ft	0
Average cost/well	$2,656 ($177.07/ft)	$2,214 ($147.02/ft)	0
Average mud cost/well	$138 ($9.20/ft)	$115 ($7.64/ft)	0
Average bits/well	19 (789 ft/bit)	17 (886 ft/bit)	0
Success ratio	100%	0%	0
Wildcat success ratio	100% (1 well)	0% (1 well)	0
Development success ratio	0% (0 wells)	0% (0 wells)	0
Total costs: Mud	$138	$115	
Drilling	$2,040	$1,701	
Completion	$616	$513	
Total	$2,656	$2,214	
Total footage	15,000	15,059	

(Costs in thousand dollars except dollars per foot)

TABLE 17. Oklahoma deep drilling
All wells drilled to 15,000 ft or deeper

	1982 (493 wells)	1981 (279 wells)	1980 (145 wells)
Average well depth	17,603 ft	16,982 ft	17,221 ft
Average cost/well	$6,193 ($351.82/ft)	$4,718 ($277.84/ft)	$4,049 ($235.14/ft)
Average mud cost/well	$505 ($28.71/ft)	$404 ($23.78/ft)	$363 ($21.09/ft)
Average bits/well	39.4 (446 ft/bit)	31.3 (543 ft/bit)	29.5 (584 ft/bit)
Success ratio	56.8%	69.2%	72.4%
Wildcat success ratio	46.9% (145 wells)	64.4% (87 wells)	60.5% (43 wells)
Development success ratio	63.8% (348 wells)	71.4% (192 wells)	77.5% (102 wells)
Total costs: Mud	$249,168	$112,678	$52,662
Drilling	$2,570,424	$1,054,719	$460,533
Completion	$473,200	$246,490	$121,878
Total	$3,053,287	$1,316,360	$587,161
Total footage	8,678,458	4,737,907	2,497,022

(Costs in thousand dollars except dollars per foot)

TABLE 18. Pennsylvania deep drilling
All wells drilled to 15,000 ft or deeper

	1982 (1 well)	1981 (0 wells)	1980 (0 wells)
Average well depth	19,365 ft	0	0
Average cost/well	$21,686 ($1,119/ft)	0	0
Average mud cost/well	$1,535 ($79.27/ft)	0	0
Average bits/well	85 (228 ft/bit)	0	0
Success ratio	100%	0	0
Wildcat success ratio	100% (1 well)	0	0
Development success ratio	0% (0 wells)	0	0
Total costs: Mud	$1,535		
Drilling	$15,518		
Completion	$6,168		
Total	$21,686		
Total footage	19,365		

(Costs in thousand dollars except dollars per foot)

TABLE 19. Texas land deep drilling
All wells drilled to 15,000 ft or deeper

	1982 (194 wells)	1981 (200 wells)	1980 (176 wells)
Average well depth	17,580 ft	17,472 ft	17,382 ft
Average cost/well	$6,073 ($345.43/ft)	$5,068 ($290.07/ft)	$3,876 ($222.98/ft)
Average mud cost/well	$555 ($31.56/ft)	$545 ($31.21/ft)	$448 ($25.75/ft)
Average bits/well	34.2 (514 ft/bit)	29.9 (585 ft/bit)	28.3 (614 ft/bit)
Success ratio	49.5%	62%	64.8%
Wildcat success ratio	35.7% (112 wells)	57.3% (124 wells)	57.3% (103 wells)
Development success ratio	68.3% (82 wells)	69.7% (76 wells)	75.3% (73 wells)
Total costs: Mud	$107,643	$109,064	$78,767
Drilling	$986,282	$818,513	$560,170
Completion	$184,352	$180,466	$108,402
Total	$1,178,075	$1,013,618	$682,172
Total footage	3,410,467	3,494,374	3,059,312

(Costs in thousand dollars except dollars per foot)

TABLE 20. Texas offshore deep drilling
All wells drilled to 15,000 ft or deeper

	1982 (16 wells)	1981 (16 wells)	1980 (10 wells)
Average well depth	16,519 ft	16,844 ft	16,569 ft
Average cost/well	$13,017 ($788.01/ft)	$13,291 ($789.08/ft)	$9,393 ($566.89/ft)
Average mud cost/well	$1,155 ($69.90/ft)	$1,112 ($66/ft)	$982 ($59.26/ft)
Average bits/well	42.8 (386 ft/bit)	52.5 (321 ft/bit)	47.4 (350 ft/bit)
Success ratio	6.3%	12.5%	30%
Wildcat success ratio	9.1% (11 wells)	8.3% (12 wells)	14.3% (7 wells)
Development success ratio	0% (5 wells)	25% (4 wells)	66.7% (3 wells)
Total costs: Mud	$18,476	$17,788	$9,819
Drilling	$198,314	$187,303	$87,737
Completion	$9,956	$24,244	$6,188
Total	$208,276	$212,659	$93,926
Total footage	264,305	269,501	165,686

(Costs in thousand dollars except dollars per foot)

(Continued)

TABLE 21. Utah deep drilling
All wells drilled to 15,000 ft or deeper

	1982 (14 wells)	1981 (10 wells)	1980 (11 wells)
Average well depth	17,079 ft	16,899 ft	17,137 ft
Average cost/well	$10,242 ($599.69/ft)	$6,477 ($383.26/ft)	$5,974 ($348.60/ft)
Average mud cost/well	$840 ($49.20/ft)	$592 ($35.04/ft)	$614 ($35.81/ft)
Average bits/well	87.1 (196 ft/bit)	56.4 (300 ft/bit)	57.1 (300 ft/bit)
Success ratio	21.4%	30%	36.4%
Wildcat success ratio	9.1% (11 wells)	0% (5 wells)	22.2% (9 wells)
Development success ratio	66.7% (3 wells)	60% (5 wells)	100% (2 wells)
Total costs: Mud	$11,764	$5,922	$6,751
Drilling	$130,538	$54,159	$60,473
Completion	$12,846	$10,271	$3,723
Total	$143,385	$64,768	$65,715
Total footage	239,100	168,994	188,511

(Costs in thousand dollars except dollars per foot)

TABLE 22. Wyoming deep drilling
All wells drilled to 15,000 ft or deeper

	1982 (43 wells)	1981 (39 wells)	1980 (38 wells)
Average well depth	17,127 ft	16,957 ft	17,013 ft
Average cost/well	$10,300 ($601.42/ft)	$8,120 ($478.83/ft)	$6,183 ($363.42/ft)
Average mud cost/well	$921 ($53.77/ft)	$834 ($49.20/ft)	$604 ($35.52/ft)
Average bits/well	70.5 (243 ft/bit)	66.1 (256 ft/bit)	50.9 (334 ft/bit)
Success ratio	51.2%	71.8%	81.6%
Wildcat success ratio	33.3% (24 wells)	63.6% (22 wells)	75% (16 wells)
Development success ratio	73.7% (19 wells)	82.4% (17 wells)	86.4% (22 wells)
Total costs: Mud	$39,600	$32,534	$22,962
Drilling	$382,792	$264,978	$203,563
Completion	$58,434	$47,483	$29,256
Total	$442,913	$316,661	$234,954
Total footage	736,451	661,323	646,502

(Costs in thousand dollars except dollars per foot)

The following 183 contractors (reported by the operating companies) drilled the wells analyzed in PEI's 1982 Deep Well Survey.

A & P Drilling Co. Inc.
Act Drilling Co.
Amoy Drilling
& Well Service Corp.
Anderson-Barnett Drilling Co.
Anderson-Myers Drilling Co.
Apollo Drilling Ltd.
Ard Drilling Co.
Arden Drilling Co.
Astro Drilling Co.
Atco Drilling Inc.
Atlantic Pacific Marine Corp.
Pernie Bailey Drilling Co.
Baker & Taylor Drilling Co.
Bay Drilling Corp.
Bayou State Oil Corp.
Bawden Drilling Inc.
James Bigard Drilling Co.
Big Chief Drilling Co.
Blocker Energy Corp.
Bokenkamp Drilling Co. Ltd.
Bomac Drilling
Bonray Energy Corp.
Brinkerhoff-Signal Inc.
Butler Drilling Corp.
Buzzini Drilling Co.
Cactus Drilling Corp.
CEC Drilling Co.
Challenger Drilling Inc.
Chapco Drilling Inc.
Chase Drilling Co.
Chiles Drilling Co.
Circle Bar Drilling Co.
Cliffs Drilling Co.
Comet Drilling
Core Drilling Co.
Continental Drilling Co. Inc.
Continental Oil Co.
Culver Drilling Co.
Decca Drilling Co.
Delex Drilling Co. Inc.
Delta Drilling Co.
Denton Brothers Drilling
Diamond M Drilling Co.
Dixilyn-Field Drilling Co.
Dolphin International Inc.
Drillers Inc.
Dual Drilling Co.
Durkee Drilling Inc.
Eagle Production
& Drilling Services Inc.
Eason Oil Co.
Eljay Drilling Corp.
Eltex Drilling Contractors Inc.
Enopco
Exeter Drilling Co.
Explorer Drilling Co.
Falcon Seaboard Drilling Co.
Flag Drilling Co.
Fluor Drilling Services Inc.
Forex-Neptune Inc.
Forwest Inc.
Four Flags Drilling Co. Inc.
F W A Drilling Co. Inc.
Glasscock Drilling
Glendel Drilling
Global Marine Inc.
Goldrus Drilling Marine
Grey Wolf Drilling Co.
Harkins & Co.
Harper-Turner Drilling
Helmerich & Payne Inc.
Henley Drilling Co.
W. B. Hinton Drilling Co. Inc.
Honeymon Drilling Co. Ltd.
Horizon Drilling Co.
Houston Offshore International Inc.
Howell Drilling Inc.
Huthnance Drilling Co.
I.E.C. Drilling Co.
Intrepid Drilling Corp.
Iredco Drilling Co.
JHJ Drilling Co.
Jones Drilling Corp.
Kelly & Kerr Drilling Co.
Kenai Corp.
Keydril Co.
Lanex Inc.
Larco Drilling Co. Inc.
Loffland Brothers Co.
Lord Drilling Co. Inc.
McVay Drilling Co.
Magee-Pool Drilling Co.
Magic Circle Drilling Co.
R. L. Manning Co.
Mardrill Inc.
Marine Drilling Co.
Marion Drlg. & Services Co. Inc.
Marlin Drilling Co. Inc.
Matagorda Drilling Co.
Maverick Drilling Co. Inc.
Mercury Drilling Co.
Merit Drilling Co.
Mesa Drilling Co. Inc.
MGF Drilling Co.
Miller Drilling
Montgomery Drilling Co.
Moran Bros. Inc.
E. W. Moran Drilling Co. Inc.
Murco Drilling Corp.
Navajo Drilling Co.
New & Hughes Drilling Co. Inc.
Nicklos Drilling Co.
Nicor Drilling Co.
Noble Drilling Corp.
Nordrill International Inc.
Nova Drilling Co.
O'Conner & Young Drilling Co.
Odeco Inc.
Oklahoma Warrior Drlg. Corp.
Omnex Energy Services Inc.
Parker Drilling Co.
Parker Well Service Inc.
Partee Drilling Inc.
Pearson American Drlg. Co.
Penrod Drilling Co.
Petro-Tex Drilling Co.
Pomco Drilling Co.
Power Rig Drilling Co. Inc.
Pozos Drilling Ltd.
Price Drilling Co.
Chesley Pruet Drilling Co.
Quarles Drilling Corp.
Rapad Drilling Co.
Ratliff Drilling Co.
Resource Drilling Inc.
Richards Drilling Co.
Rio Grande Drilling Co.
Rine Drilling Co. Inc.
Robinson Brothers Drilling Co.
J. B. Roden Drilling Co.
Rome Companies Inc.
Sage Drilling Co. Inc.
Salen Offshore Drilling Co.
Sandia Drilling Co.
Santa Fe Drilling Co.
Search Drilling Co.
Seneca Drilling Co.
Dean Shank Drilling Co. Inc.
Sharp Drilling Co. Inc.
Shiloh Drilling
A. J. Smart Drilling Co.
Smith & Stovall Drilling Corp.
Southland Drilling Co. Inc.
Southwestern Drilling Co.
Teledyne Movible Offshore Inc.
Temple Drilling Co.
Tesoro Drilling Co.
Tierra Drilling Corp.
Time Drilling Co.
Top Drilling Inc.
Transamerica Drilling Co. Inc.
Transcontinental Drilling Co.
Transworld Drilling Co.
Trend Drilling Co.
TRG Drilling Corp.
Triad Drilling Corp.
Trigg Drilling Co.
Tri-Service Drilling Co.
Two "R" Drilling Co. Inc.
Unit Drilling & Exploration Co.
United Drilling Co.
URC Drilling Co.
Verna Corp.
Viersen & Cochran Drilling Co.
Warton Drilling Co.
Watson Drilling Co.
Welsh Drilling & Service Co.
Westburne Drilling Inc.
Western Drilling Co.
Wheless Drilling Co.
Willbros Drlg. Inc.
Wilson Brothers Drilling Co.
Fred Wilson Drilling Co. Inc.
Zapata Off-Shore Co.

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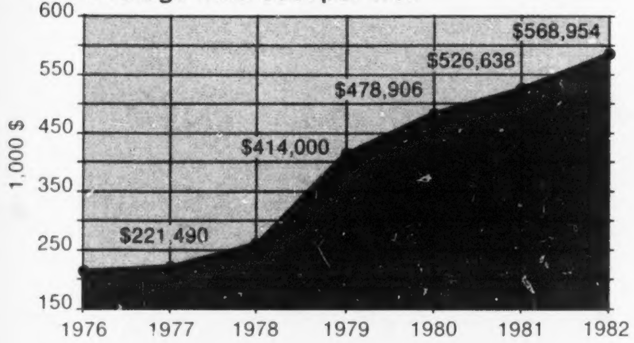
OVERSIZE FOLDOUT(S) FOUND HERE IN THE PRINTED EDITION OF THIS VOLUME ARE FOUND FOLLOWING THE LAST PAGE OF TEXT IN THIS MICROFICHE EDITION.

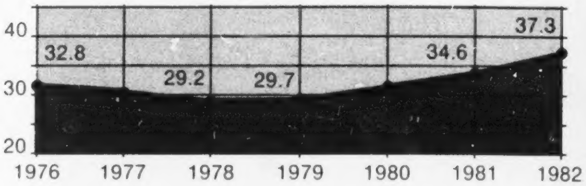
SEE FOLDOUT NUMBER 1

Based on PETROLEUM ENGINEER INTERNATIONAL'S Annual Deep Well Survey

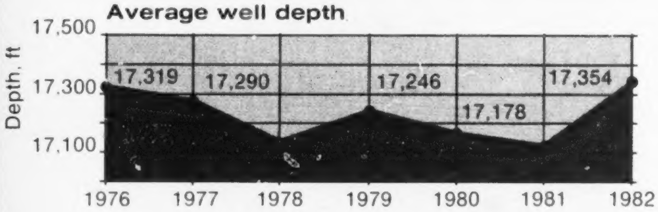
Average mud cost per well



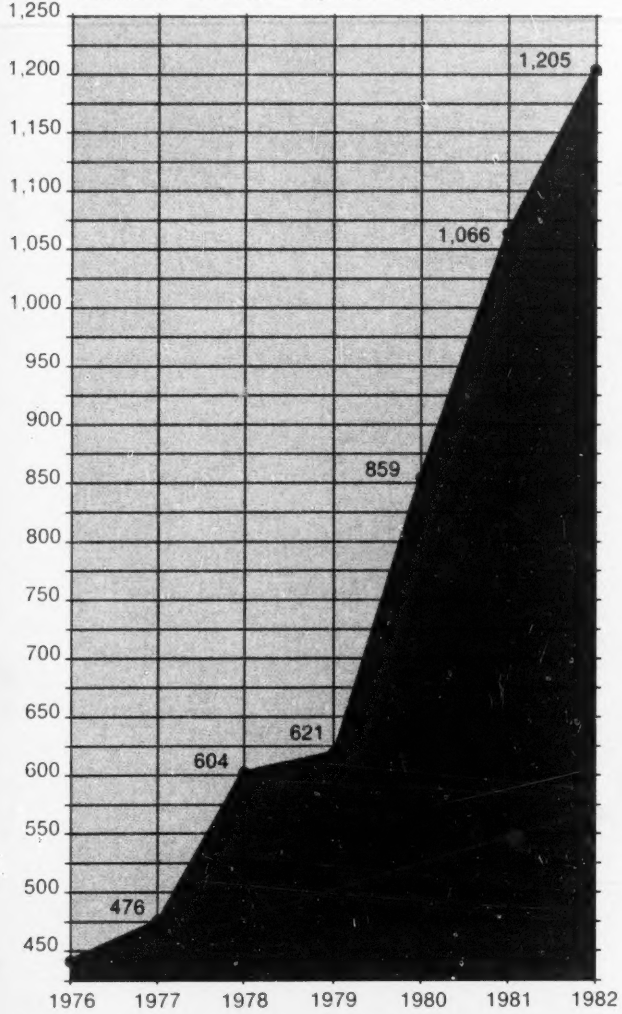
Average bits per well



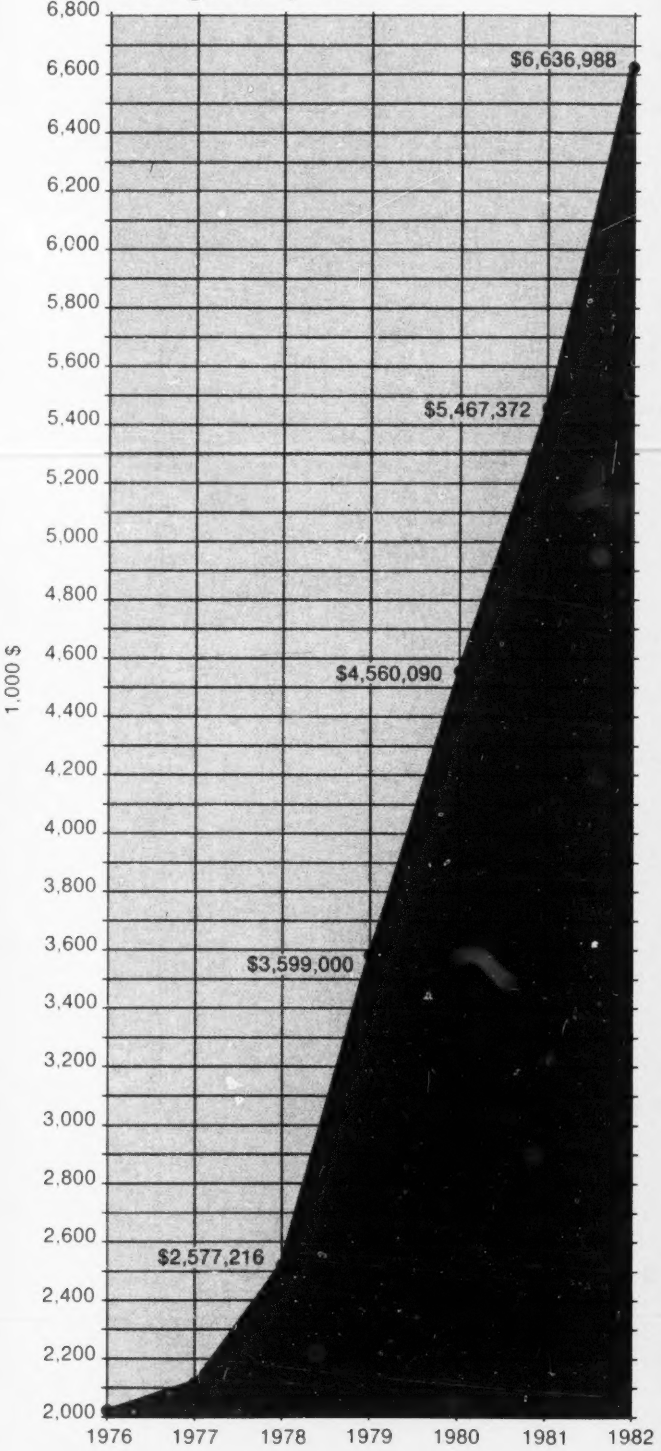
Average well depth



Number of wells 15,000 ft & below



Average cost per well



DEEP WELL OPERATORS

There were 242 deep well operators in 1982.

Adams Exploration Co.
Ada Oil Exploration Corp.
Adco Production Co.
Adobe Oil & Gas Corp.
Amarex Inc.
Amerada Hess Corp.
American Quasar Petroleum Co.
Aminoil USA Inc.
Amoco Production Co.
Anadarko Land & Exploration Co.
Anadarko Production Co.
Andover Oil Co.
ANR Production Co.
An-Son Corp.
Ansythe Exploration
Apache Corp.
ARCO Oil and Gas Co.
Arkla Exploration Co.
Aspen Exploration
ATAPCO
Avanti Energy
Bass Enterprises Production Co.
Berry Petroleum Corp.
Borden Inc.
Border Exploration Co.
Bow Valley Exploration (U.S.) Inc.
Bracken Exploration Co.
Brent Exploration
Tom Brown Inc.
BTA Oil Producers
Bunker Exploration Co.
Burkhart Petroleum Corp.
Buttonwood Petroleum Inc.
C & K Petroleum Inc.
Callon Petroleum Co.
Caltex Petroleum Corp.
Cambridge & Nail
Jerry Chambers
Champlin Petroleum Co.
Chevron U.S.A. Inc.
Cities Service Co.
Clements Energy Inc.
Cliffs Drilling Co.
CNG Producing Co.
Cockrell Oil Corp.
Columbia Gas Development Corp.
Conoco Inc.
Continental Resources Corp.
Coquina Oil Corp.
Coral Petroleum Inc.
Core Petroleum Ltd.
Cotton Petroleum Corp.
Edwin L. Cox/Berry R. Cox
John L. Cox
Crown Central Petroleum Corp.
Dallas Exploration Inc.
Damco Energy
Damson Oil Corp.
Davis Oil Co.
Deep Gas Energy
Deep Gas Exploration Inc.
Devon Corp.
DI Energy Inc.
Dorchester Exploration Inc.
Dow Chemical U.S.A.
Walter Duncan Inc.
Dyco Petroleum Corp.
E & I Exploration
El Paso Natural Gas Co.
Encino Oil
Energy Reserves Group Inc.
Energy Resources Oil & Gas Corp.
Ennex Production Co.
Enstar Petroleum Inc.
Entex Petroleum Inc.
ETS Enterprises
Exchange Oil & Gas Corp.
Exxon Co. U.S.A.
Federated Energy
First Energy Corp.
Florida Exploration Co.
Forest Oil Corp.
Franks Petroleum Inc.
Joseph F. Fritz
Gadsco Inc.
Gas Transportation Corp.
General American Oil Co. of Texas
Getty Oil Co.
The GHK Companies
GMW Corp.
Grace Petroleum Corp.
Gulf Oil Corp.
Hadson Petroleum Corp.
Michel T. Halbouty Energy Co.
Hamilton Brothers Oil Co.
Jake L. Hamon
Hanover Management
Harper Oil Co.
HCW Exploration
William G. Helis Estate
Helmerich & Payne Inc.
Hilliard Oil & Gas Inc.
HNG Oil Co.
Houston Oil & Minerals Corp.
Howell Drilling Inc.
Hunt Energy Corp.
Hunt Oil Co.
Husky Oil Co.
IMC Exploration Co.
Indrex Integrated Drilling & Exploration
Inexco Oil Co.
InterNorth Inc.
J.F.D. Inc.
Jones Exploration Co.
Kaiser-Francis Oil Co.
Kelly-Broc
Kerr-McGee Corp.
Roy E. Kimsey Jr.
Kirby Exploration Co.
Latham Exploration Co. Inc.
Lea Exploration Co.
Lear Petroleum Corp.
Leede Oil & Gas Inc.
Lee Energy Exploration
LGS Exploration Inc.
The Louisiana Land & Exploration Co.
Loutex Energy
Lyons Petroleum Inc.
McAlester Fuel Co.
McCormick Oil & Gas Co.
McFarlane Oil Co.
McMoRan Exploration Co.
McRae Exploration Inc.
Magic Circle Energy Corp.
Mapco Inc.
Marathon Oil Co.
Marlon Corp.
Tom F. Marsh Inc.
Marshall Oil Corp.
Martin Exploration Co.
May Petroleum Inc.
Mesa Petroleum Co.
MGF Oil Corp.
Michigan-Wisconsin Pipe Line Co.
Midroc Oil Co.
R. G. Mitchell
R. L. Mitchell
Mobil Oil Corp.
Moncrief Oil Interests
Monsanto Oil Co.
Mosbacher Production Co.
MTS Ltd. PA
Natomas North America Inc.
Natural Gas Corp. of California
Nicklos Oil & Gas Co.
Nortex Gas & Oil Co.
Northwest Exploration Co.
Nova Energy Corp.
Ocean Drilling & Exploration Co.
Oneok Exploration Co.
Oxy Petroleum Inc.
Patrick Petroleum Co.
PCX Corp.
Pel-Tex Oil Co. Inc.
Pelto Oil Co.
Pend Orielle Oil & Gas Co.
Pennington Oil Inc.
Pennzoil Exploration and Production Co.
The Petroleum Corp. of Delaware
Petrus Operating
Phelps Dodge Fuel Development Corp.
Phillips Petroleum Co.
Pioneer Production Corp.
Placid Oil Co.
Plateau Exploration & Production
Pogo Producing Co.
Ports-of-Call Oil Co.
Prudential Drilling Co.
Pruet Oil Co.
Quintana Petroleum Corp.
R & R Exploration Co. Inc.
Ratliff Exploration
Reading & Bates Petroleum Co.
Ricks Exploration Co.
RK Petroleum Corp.
Robinson Brothers Drilling Co.
Sabine Production Co.
Samedan Oil Corp.
Samson Resources Co.
Sandefer Oil & Gas Inc.
Sanguine Ltd.
Santa Fe Energy Co.
Saxon Oil Co.
Scandrill Oil
Seawide Ltd.
Shell Oil Co.
Sohio Petroleum Co.
Sonat Exploration Co.
Southland Royalty Co.
South Louisiana Production Co.
Southwest Petroleum Corp.
Spooner Petroleum Co.
The Stone Oil Corp.
Sun Exploration and Production Co.
Sunrise Exploration
Superior Oil
Supron Energy Corp.
System Fuels Inc.
Tana Oil & Gas Corp.
Tatham Oil & Gas Co.
John A. Taylor
Tenneco Oil Co.
Terra Resources Inc.
Texaco Inc.
Texas Crude Inc.
Texas Eastern Corp.
Texas Gas Exploration Corp.
Tipco
Toce Oil
Tomlinson Interests Inc.
Towner Petroleum Co.
Transcontinental Oil Corp.
Transco Exploration Co.
Trans-Western Exploration Inc.
Trigg Drilling Co.
TXO Production Corp.
Union Oil Co. of California
Union Texas Petroleum
Unit Drilling and Exploration Co.
Universal Resources Corp.
Wagner & Brown
Wainoco Oil & Gas Co.
L. O. Ward
Weaver Exploration Co.
Weaver Oil and Gas Corp.
Westland Oil Development Corp.
Westland Oil Co.
Whitmar Exploration
Williams Exploration Co.
Woods Petroleum Corp.
WWF Oil Co.
Yates Petroleum Corp.

132 Ultradeep Wells Cost $1.5 Billion

The number of ultradeep wells completed in the U.S. went way over the century mark for the first time last year after having been stuck at 81 during both 1980 and 1981. Last year's 132 wells drilled to 20,000 ft or deeper cost almost $1.5 billion, and they resulted in 50 commercial producers.

At an average cost per well of $11 million, the ultradeep wells last year cost $564.74/ft to drill and complete. They consumed 60 bits apiece, and they each used more than a million dollars worth of drilling fluids. Their success ratio (37.8%) reflected a substantial drop from 1981's success ratio of 60.2%, but it was better than the 31.3% registered by 1979's 64 ultradeep wells.

In Oklahoma, 67 out of 493 deep wells last year were drilled past the 20,000-ft mark, so that state can claim the lead in both categories. In second place among ultradeep drilling states is Texas, with 31. Louisiana is third with 20. Only three ultradeep wells were drilled offshore in 1982, although two of them, offshore Alabama, were completed as producers. They cost, however, more than $30 million apiece.

More than half (62%) of the ultradeep wells were wildcats last year, and their vital statistics conform pretty closely to overall ultradeep well data – except that only 29.3% of them were successful. Success ratio for ultradeep development wells was 62%.

Oklahoma led all states in ultradeep wildcatting with 34 wells – 13 of them successful. And, the state's drillers were able to do it for less per-well cost than it took in 1981. Last year's 34 ultradeep Oklahoma exploration wells cost an average of $9.85 million ($458.14/ft), compared with 1981's average cost for nine wildcats of $10.06 million ($460.13/ft). Six of the 1981 wildcats were successful, however.

Texas was in second place last year with 25 ultradeep wildcats – eight of which were successful. They were drilled to an average total depth of 22,202 ft at an average cost of $466.75/ft.

TABLE 1. U.S. ultradeep drilling
All wells drilled to 20,000 ft or deeper

		1982 (132 wells)	1981 (81 wells)	1980 (81 wells)
Average well depth		21,617 ft	21,546 ft	21,645 ft
Average cost/well		$11,242 ($520.05/ft)	$9,957 ($462.15/ft)	$8,361 ($386.27/ft)
Average mud cost/well		$1,068 ($49.39/ft)	$1,041 ($48.30/ft)	$999 ($46.14/ft)
Average bits/well		60.3 (558.2 ft/bit)	47.2 (473 ft/bit)	45.5 (476 ft/bit)
Success ratio		37.8%	60.2%	51.9%
Wildcat success ratio		29.3% (82 wells)	53.6% (57 wells)	50% (50 wells)
Development success ratio		62% (50 wells)	74.5% (24 wells)	54.8% (31 wells)
Total costs:	Mud	$140,939	$84,284	$80,887
	Drilling	$1,316,263	$674,994	$548,703
	Completion	$166,926	$129,065	$115,981
	Total	$1,483,931	$806,537	$677,231
	Total footage	2,853,430	1,745,190	1,753,255

(Costs in thousand dollars except dollars per foot)

Only one of Louisiana's 13 ultradeep wildcats was successful. Five of the state's seven development wells are producers, however. As might be expected when dealing with the enormous pressures and temperatures of the deep Tuscaloosa Trend, Louisiana's ultradeep well costs are the highest of any state with more than one or two of the super wells. Pelican State operators paid $12.3 million per ultradeep well in 1982. Ultradeep rigs in Oklahoma turned to the tune of $10.2 million for each of that state's 67 20,000-ft wells. And

TABLE 2. Alabama offshore ultradeep drilling
All wells drilled to 20,000 ft or deeper

	1982 (2 wells)	1981 (0 wells)	1980 (0 wells)
Average well depth	21,404 ft	0	0
Average cost/well	$36,750 ($1,716/ft)	0	0
Average mud cost/well	$1,940 ($90.61/ft)	0	0
Average bits/well	106.5 (201 ft/bit)	0	0
Success ratio	100%	0	0
Wildcat success ratio	0% (0 wells)	0	0
Development success ratio	100% (2 wells)	0	0
Total costs: Mud	$3,879		
Drilling	$66,173		
Completion	$7,327		
Total	$73,500		
Total footage	42,808		

(Costs in thousand dollars except dollars per foot)

TABLE 3. Florida offshore ultradeep drilling
All wells drilled to 20,000 ft or deeper

	1982 (1 well)	1981 (0 wells)	1980 (0 wells)
Average well depth	21,068 ft	0	0
Average cost/well	$23,110 ($1,096/ft)	0	0
Average mud cost/well	$2,073 ($98.40/ft)	0	0
Average bits/well	84 (251 ft/bit)	0	0
Success ratio	0%	0	0
Wildcat success ratio	0% (1 well)	0	0
Development success ratio	0% (0 wells)	0	0
Total costs: Mud	$2,073		
Drilling	$23,110		
Completion	0		
Total	$23,110		
Total footage	21,068		

(Costs in thousand dollars except dollars per foot)

TABLE 4. Louisiana ultradeep drilling
All wells drilled to 20,000 ft or deeper

	1982 (20 wells)	1981 (27 wells)	1980 (24 wells)
Average well depth	20,844 ft	21,107 ft	21,259 ft
Average cost/well	$12,389 ($594.37/ft)	$10,867 ($514.83/ft)	$8,918 ($419.49/ft)
Average mud cost/well	$1,390 ($66.70/ft)	$1,181 ($55.96/ft)	$1,159 ($54.52/ft)
Average bits/well	53.4 (390 ft/bit)	49.8 (424 ft/bit)	47.5 (448 ft/bit)
Success ratio	30%	55.6%	45.8%
Wildcat success ratio	7.7% (13 wells)	45% (20 wells)	47.4% (19 wells)
Development success ratio	71.4% (7 wells)	85.7% (7 wells)	40% (5 wells)
Total costs: Mud	$27,804	$31,889	$27,818
Drilling	$229,169	$241,265	$171,184
Completion	$18,607	$50,707	$41,150
Total	$247,777	$293,398	$214,035
Total footage	416,876	569,893	510,221

(Costs in thousand dollars except dollars per foot)

TABLE 5. Mississippi ultradeep drilling
All wells drilled to 20,000 ft or deeper

	1982 (7 wells)	1981 (10 wells)	1980 (8 wells)
Average well depth	21,678 ft	22,269 ft	22,129 ft
Average cost/well	$10,406 ($480/ft)	$12,279 ($551.40/ft)	$11,860 ($535.95/ft)
Average mud cost/well	$1,251 ($57.70/ft)	$1,310 ($58.82/ft)	$1,286 ($58.13/ft)
Average bits/well	45.1 (480 ft/bit)	63.1 (353 ft/bit)	57.5 (385 ft/bit)
Success ratio	14.3%	40%	37.5%
Wildcat success ratio	20% (5 wells)	28.6% (7 wells)	20% (5 wells)
Development success ratio	0% (2 wells)	66.7% (3 wells)	66.7% (3 wells)
Total costs: Mud	$8,756	$13,099	$10,291
Drilling	$68,025	$98,344	$72,590
Completion	$4,814	$24,449	$21,791
Total	$72,839	$122,793	$94,882
Total footage	151,748	222,692	177,035

(Costs in thousand dollars except dollars per foot)

TABLE 6. Oklahoma ultradeep drilling
All wells drilled to 20,000 ft or deeper

	1982 (67 wells)	1981 (14 wells)	1980 (14 wells)
Average well depth	21,601 ft	21,620 ft	22,910 ft
Average cost/well	$10,233 ($473.72/ft)	$9,988 ($461.95/ft)	$7,452 ($325.24/ft)
Average mud cost/well	$958 ($44.34/ft)	$910 ($42.10/ft)	$802 ($35.02/ft)
Average bits/well	63 (343 ft/bit)	64.2 (337 ft/bit)	47.6 (481 ft/bit)
Success ratio	43.3%	50.0%	57.1%
Wildcat success ratio	38.2% (34 wells)	66.7% (9 wells)	66.7% (6 wells)
Development success ratio	48.5% (33 wells)	20% (5 wells)	50% (8 wells)
Total costs: Mud	$64,171	$12,742	$11,231
Drilling	$589,933	$122,638	$81,149
Completion	$95,666	$17,144	$23,171
Total	$685,603	$139,825	$104,321
Total footage	1,447,287	302,681	320,746

(Costs in thousand dollars except dollars per foot)

TABLE 7. Texas ultradeep drilling
All wells drilled to 20,000 ft or deeper

	1982 (31 wells)	1981 (25 wells)	1980 (27 wells)
Average well depth	22,149 ft	21,879 ft	21,497 ft
Average cost/well	$9,890 ($446.54/ft)	$7,834 ($358.06/ft)	$6,510 ($302.84/ft)
Average mud cost/well	$909 ($41.02/ft)	$884 ($40.41/ft)	$863 ($40.14/ft)
Average bits/well	51.7 (429 ft/bit)	37.6 (581 ft/bit)	34.9 (616 ft/bit)
Success ratio	35.5%	72%	70.4%
Wildcat success ratio	32% (25 wells)	62.5% (16 wells)	73.3% (15 wells)
Development success ratio	50% (6 wells)	88.9% (9 wells)	66.7% (12 wells)
Total costs: Mud	$28,167	$22,101	$23,299
Drilling	$274,053	$163,832	$142,729
Completion	$31,812	$32,018	$28,179
Total	$306,602	$195,850	$175,773
Total footage	686,618	546,972	580,413

(Costs in thousand dollars except dollars per foot)

(Continued)

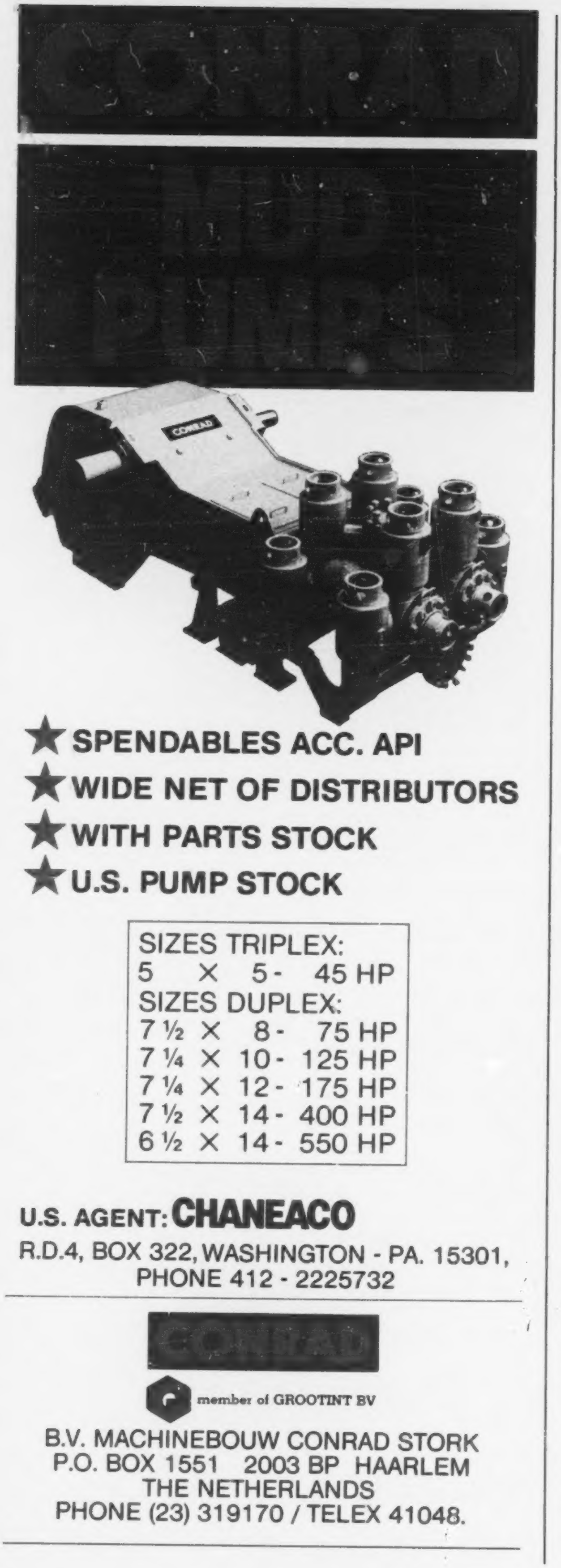


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TABLE 8. Utah ultradeep drilling
All wells drilled to 20,000 ft or deeper

		1982 (1 well)	1981 (0 wells)	1980 (1 well)
Average well depth		21,874 ft	0	21,845 ft
Average cost/well		$12,000 ($548.60/ft)	0	$11,823 ($541.22/ft)
Average mud cost/well		$1,187 ($54.27/ft)	0	$1,563 ($71.55/ft)
Average bits/well		107 (204 ft/bit)	0	117 (187 ft/bit)
Success ratio		0%	0	0%
Wildcat success ratio		0% (1 well)	0	0% (1 well)
Development success ratio		0% (0 wells)	0	0% (0 wells)
Total costs:	Mud	$1,187		$1,563
	Drilling	$12,000		$10,730
	Completion	0		0
	Total	$12,000		$11,823
	Total footage	21,874		21,845

(Costs in thousand dollars except dollars per foot)

TABLE 9. Wyoming ultradeep drilling
All wells drilled to 20,000 ft or deeper

		1982 (3 wells)	1981 (1 well)	1980 (2 wells)
Average well depth		21,717 ft	20,170 ft	20,354 ft
Average cost/well		$20.833 ($959.31/ft)	$10,344 ($512.84/ft)	$6,532 ($320.90/ft)
Average mud cost/well		$1,634 ($75.24/ft)	$1,055 ($52.31/ft)	$713 ($35.03/ft)
Average bits/well		118 (184 ft/bit)	75 (269 ft/bit)	49 (415 ft/bit)
Success ratio		33.3%	100%	50%
Wildcat success ratio		33.3% (3 wells)	100% (1 well)	0% (0 wells)
Development success ratio		0% (0 wells)	0% (0 wells)	50% (2 wells)
Total costs:	Mud	$4,902	$1,055	$1,426
	Drilling	$53,800	$5,820	$11,262
	Completion	$8,700	$4,524	$1,690
	Total	$62,500	$10,344	$13,063
	Total footage	65,151	20,170	40,708

(Costs in thousand dollars except dollars per foot)

drillers in Texas charged an average of $9.8 million for the 31 ultradeep wells in that state.

Mississippi, which had seven of the big wells, put them down at a cost of $10.4 million apiece ($480/ft). Only one, a wildcat, was successful, however.

Oklahoma success ratio was tops among the leading ultradeep-drilling states, although Louisiana registered an impressive 71.4% for its seven super-deep development wells.

At the beginning of last year, a number of the new generation of super rigs (designed to drill to 50,000 ft or deeper) were over holes targeted to depths greater than the 8-year-old record of 31,441 ft. But, so far, the record still stands. Whether it will fall this year or not, only time will tell. Most of the candidate wells are in Oklahoma, however, and bank problems there last summer played havoc with the availability of drilling funds. That is a third problem to be coped with by Oklahoma operators (in particular), as well as declining gas prices and confusing tax policies.

—Rich McNally and Mary Jane Ellis

Circle 225 on Reader Service Card

mented. Under terms of the anticipated agreement, the Bartlesville center, which has been run by the federal government since 1918, would remain government owned.

International Count Shows One-Rig Gain

The international rotary rig count closed out 1982 with 1,447 active rigs, only one more than the total at the end of 1981. There was a 29-rig increase offshore, however.

The Middle East, aided by the return to the charts of Iran and Iraq, is credited with a 56-rig increase. The second-best showing was made by the Far East, with a 16-rig increase.

On the downside, Latin America was down by 36 rigs, and Europe was off 20. The South Pacific (Australia, New Zealand, and Papua New Guinea) was down 13 rigs. Africa was off by only two.

International Rotary Rig Report, prepared by Hughes Tool Co.

(Figures in parentheses indicate how many of each country's rigs are offshore rigs.)

	Dec. 1981	Nov. 1982	Dec. 1982
Africa			
Algeria	77	90	90
Angola	8(6)	13(9)	13(9)
Benin	0	1(1)	1(1)
Cameroun	6(6)	7(6)	7(6)
Chad	1	1	1
Gabon	15(11)	10(8)	10(8)
Guinea	0	1	1
Ivory Coast	6(6)	5(5)	5(5)
Libya	33(2)	28(1)	28(1)
Morocco	6(1)	5	5
Niger	5	1	1
Nigeria	28(9)	22(13)	21(11)
Congo	7(5)	5(4)	5(4)
Zaire	3(1)	2(1)	2(1)
Senegal	0	1	1
Sierra Leone	0	1(1)	1(1)
South Africa	2(2)	2(2)	2(2)
Sudan	2	3	3
Tunisia	11(3)	11(3)	11(3)
	210(52)	209(55)	208(53)
Europe			
Austria	10	8	8
Denmark	2(2)	2(2)	2(2)
France	30(2)	15(1)	13
Germany	30	31	31
Greece	6(3)	4(2)	4(2)
Holland	18(9)	23(15)	23(15)
Italy	33(8)	34(7)	37(7)
Norway	12(12)	12(12)	12(12)
Portugal	1	1	1
Spain	12(3)	10(4)	10(4)
Switzerland	1	1	1
United Kingdom	63(55)	53(51)	53(50)
Yugoslavia	22	25	25
	240(94)	219(94)	220(92)
Far East			
Bangladesh	4	6	4
Brunei	7(6)	12(8)	13(9)
Burma	24	33	34(1)
India	44(7)	53(12)	54(12)
Indonesia	89(29)	93(33)	93(33)
Japan	17(2)	19(2)	19(2)
Malaysia	13(13)	14(14)	11(11)
Pakistan	14	18	18
Philippines	17(3)	10(1)	12(1)
Sri Lanka	1(1)	0	0
Taiwan	12(1)	1(1)	0
Thailand	7(4)	7(4)	7(4)
	249(66)	266(75)	265(73)
Latin America			
Argentina	62(4)	67(1)	70(1)
Barbados	1	1	1
Bolivia	14	8	8
Brazil	89(29)	99(36)	100(36)
Chile	9(3)	6(3)	6(3)
Colombia	23	24(1)	21(1)
Costa Rica	0	1	1
Dominican Rep.	1	0	0
Ecuador	5	6(1)	6(1)
Guatemala	7	3	4
Mexico	220(19)	194(23)	187(22)
Paraguay	1	0	0
Peru	26(5)	21(6)	18(5)
Trinidad	14(6)	13(5)	10(5)
Venezuela	67(16)	72(18)	68(18)
	536(82)	515(94)	500(92)
Middle East			
Abu Dhabi	35(16)	44(27)	44(17)
Bahrain	1	1	1
Dubai	3(2)	2(1)	2(1)
Egypt	30(19)	39(21)	39(21)
Iran	0	11(2)	11(2)
Iraq	5	28	28
Kuwait	3	5	5
Oman	11	12(2)	12(2)
Qatar	6(3)	3(1)	3(1)
Ras Al Khaimah	1	2(1)	2(1)
Saudi Arabia	29(13)	28(12)	28(12)
Sharjah	3(1)	2	2
Syria	16	15	15
Turkey	26	43	33
Umm Al Qaiwain	1	1	1
	170(54)	236(67)	226(67)
South Pacific			
Australia	38(9)	30(11)	27(10)
New Zealand	2(1)	1	1
Papua New Guinea	1	0	0
	41(10)	31(11)	28(10)
Totals	1,446 (358)	1,476 (396)	1,447 (387)

Enstar Completes Sixth Mestena Well

Enstar Petroleum Inc. has completed the sixth natural gas well in the Mestena Grande field in Jim Hogg County, Texas.

The Mestena E-6 tested 3 MMcfd of gas and 153 b/d of condensate with a flowing tubing pressure of 2,800 psi. The well was completed in the Queen City formation over selected intervals between 9,530 and 9,664 ft.

Equatorial Guinea Calls For Bids

The government of Equatorial Guinea in sub-Sahara Africa has issued a call for bids for oil exploration. Deadline for bidding is March 23, 1983.

Seismic data, an evaluation of the country's hydrocarbon potential, and a copy of its petroleum law are available from Petroconsultants S.A., 8-10 Rue Muzy, CH-1211, Geneva, Switzerland.

Additional information in the U.S. is available from Simon Bensimon, Equatorial Guinea Desk Officer, U.S. Department of Commerce, Washington, D.C. His phone number is (202) 377-0357.

ITR Completes Louisiana Discovery

ITR Petroleum Inc.'s Lake Charles Naval Stores No. 2 well in the Reeves field in Allen Parish, Louisiana, penetrated 14 ft of pay in the Frio sand. It tested 336 b/d of 29° gravity oil through an $^{18}/_{64}$-in. choke with flowing tubing pressure of 320 psi from perforations at 5,840-46 ft.

Buttes Finds Oil In Bancroft Sand

Buttes Resources Co.'s Doornbos McPherson K No. 1 well has been completed in the previously untested Bancroft sand at 8,003 to 8,008 ft.

The well, flowing 119 b/d of crude on an $^{8}/_{64}$-in. choke with flowing tubing pressure of 980 psi, is located in the Hurricane Creek field in Beauregard Parish, Louisiana.

Gas Discovery Northwest Of Denver

Carter/Edwards Production Inc.'s No. 22-1 Church Estate is the first commercial natural gas well in Jefferson County, Colorado.

Located 13 miles northwest of Denver, the well tested 326 Mcfd of gas and 12 b/d of fluid through a $^{32}/_{64}$-in. choke with casing pressure of 900 psi from the J sandstone between 9,508 and 9,556 ft. The fluid is a mixture of oil, condensate, and water.

Deca Drills Wyoming Gasser

Deca Energy Corp. has completed its 7-1 Amoco-Champlin gas well in Sweetwater County, Wyoming. Drilled to total depth of 5,190 ft, the well was completed in the Second Frontier sand at 5,135-45 ft.

It flowed 1.4 MMcfd of gas on a ¾-in. choke during an initial potential test.

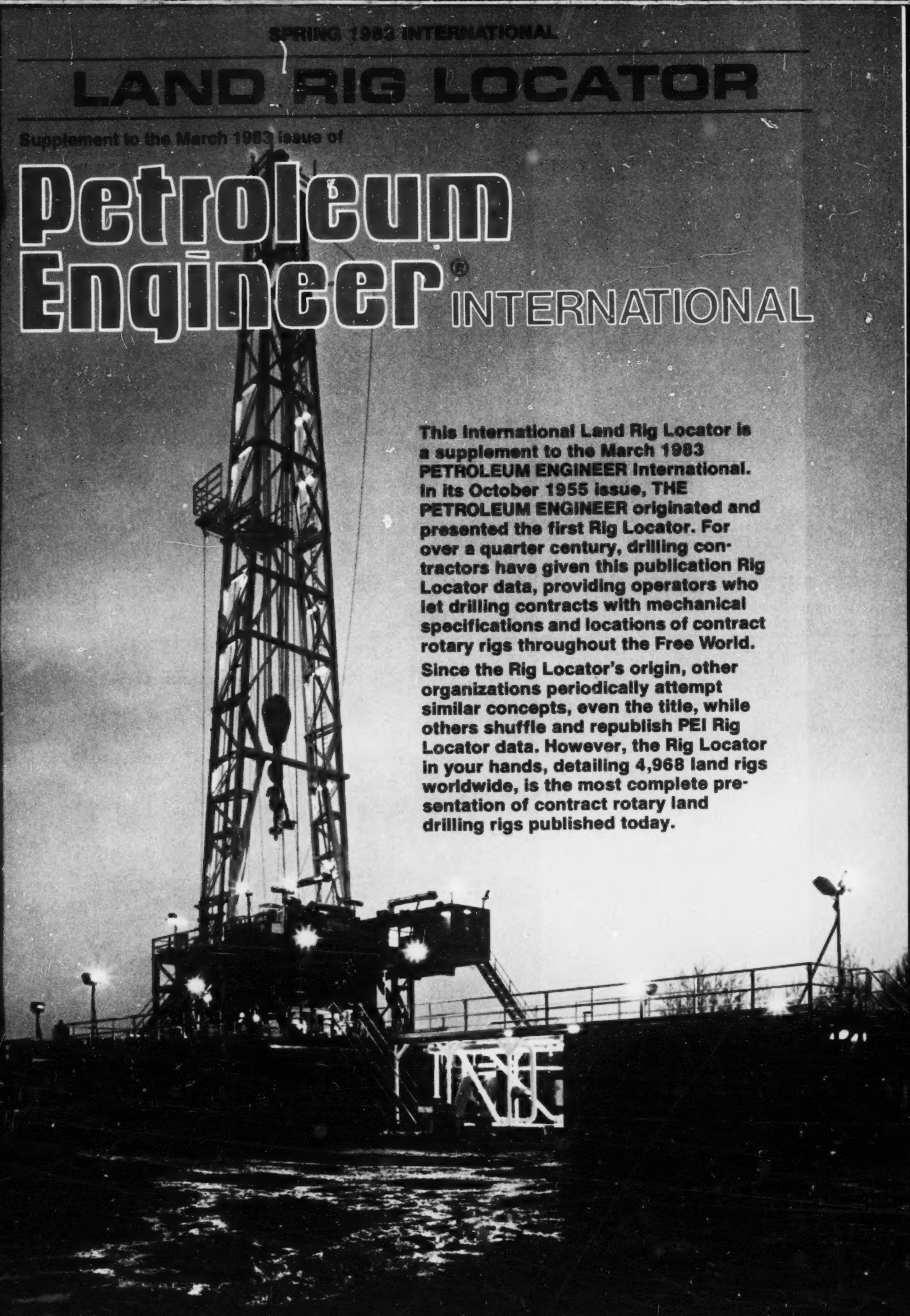
(Continued)

SPRING 1983 INTERNATIONAL

LAND RIG LOCATOR

Supplement to the March 1983 issue of

Petroleum Engineer® INTERNATIONAL



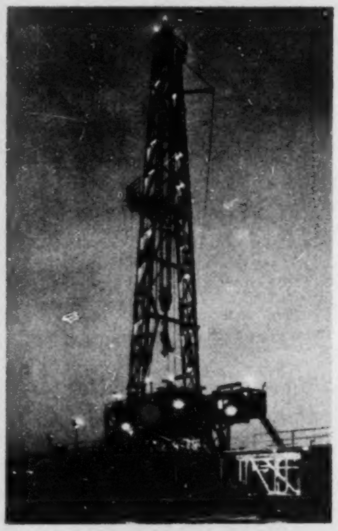
This International Land Rig Locator is a supplement to the March 1983 PETROLEUM ENGINEER International. In its October 1955 issue, THE PETROLEUM ENGINEER originated and presented the first Rig Locator. For over a quarter century, drilling contractors have given this publication Rig Locator data, providing operators who let drilling contracts with mechanical specifications and locations of contract rotary rigs throughout the Free World.

Since the Rig Locator's origin, other organizations periodically attempt similar concepts, even the title, while others shuffle and republish PEI Rig Locator data. However, the Rig Locator in your hands, detailing 4,968 land rigs worldwide, is the most complete presentation of contract rotary land drilling rigs published today.

Petroleum Engineer® INTERNATIONAL

Spring 1983 International

LAND RIG LOCATOR



Bawden Drilling Inc.'s Rig 2, a National 1320 UE, operating in Texas (photo by Ray Wagner).

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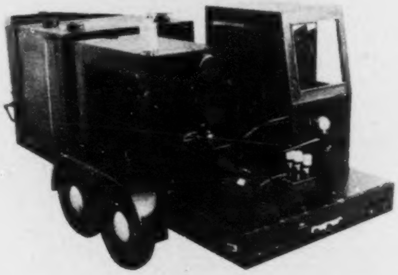

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BERENTZ DRILLING CO PO Box 428 Eureka KS 67045 316-583-5202

B (Cont'd)

BERGMAN DRILLING INC 520 Union Center Bldg Wichita KS 67202 316-267-5291
BEVERLY DRILLING CO PO Box 446 Logan OH 43183 614-385-8085
BIG 6 DRILLING CO 7500 San Felipe Ste 666 Houston TX 77063 713-783-2300
BIG CHIEF DRILLING CO PO Box 14837 Oklahoma City OK 73113 405-843-5721
BIG SEVEN DRILLING CO 400 Citizens Bldg 115 SE Third St Evansville IN 47708 812-425-3503
BIG SPRINGS DRILLING INC PO Box 8287 Wichita KS 67508 316-681-1732
JAMES BIGARD DRILLING CO 1315 N Mission Rd PO Box 509 Mt Pleasant MI 48858 517-772-5955
BIGHORN DRILLING INC 1625 KSB&T Bldg Wichita KS 67202 316-267-1550
BILBO DRILLING CO PO Box 1099 Victoria TX 77901 512-578-6258
BIRD DRILLING 304 Eighth Ave SW Ste 800 Calgary Alberta T2P 1C2 Canada 403-264-1512
BLACKSTONE DRILLING INC PO Box 1184 523 W Kansas McPherson KS 67460 316-241-1250
BLOCKER DRILLING CO PO Box 2130 Alice TX 78332 512-664-0114
BLOCKER DRILLING 800 Berring Dr Ste 400 Houston TX 77057 713-974-9100
BLOCKER DRILLING CANADA LTD 11012 Macleod Trail S Ste 800 Calgary Alberta T2J 6A5 Canada 403-278-6050
BODARD & HALE DRILLING CO PO Box 1565 Shawnee OK 74801 405-273-7300
J B BOHANNAN DRILLING INC PO Box 6 2324 N Hwy 83 Liberal KS 67901 316-624-2202
BOMAC DRILLING (See GRACE-BOMAC DRILLING)
BONRAY DRILLING CORP Box 340 Rte 4 Oklahoma City OK 73121 405-424-4327
BRAHANEY DRILLING CO PO Box 1694 Midland TX 79702 915-684-6305
BRANDT DRILLING INC 1200 Douglas Bldg Wichita KS 67202 316-262-8357
BRAVO DRILLING INC PO Box 1083 Perryton TX 79070 806-435-2869
BRINKERHOFF-SIGNAL INC 3400 Anaconda Tower 555 17th St Denver CO 80202 303-571-1041
BRITTON INDUSTRIES DRILLING 312 N Big Spring Midland TX 79701 915-684-8271
TOM BROWN INC (See TMBR DRILLING INC)
BRUNNER DRILLING CO Rte 1 Box 165-A Ranger TX 76470 817-647-3742
RICK BUCK OIL & GAS CORP 2525 Northwest Expy Oklahoma City OK 73112 405-848-2866
BUFFALO DRILLING CO PO Box 911 Hays KS 67601 913-735-2215
BUFFALO DRILLING INC 435 Page 220 W Douglas Wichita KS 67202 316-265-9686
L D BURNS DRILLING CO One Parker Square Ste 500 Wichita Falls TX 76308 817-723-0512
BURRIS DRILLING CO 600 N 600-17th St Denver CO 80202 303-892-9718
BURRO DRILLING CO PO Box 4260 Victoria TX 77901 512-578-9021
BUTLER-JOHNSON INC 600 Travis Place Shreveport LA 71101 318-226-0731
BUZZINI DRILLING CO 8700 Crownhill Ste 300 San Antonio TX 78209 512-583-9856

C

C E C DRILLING CO 2601 NW Expwy Ste 1000W Oklahoma City OK 73112 405-840-3356
C M D DRILLING CO 1331 Oakhurst Wichita Falls TX 76302 817-767-8432
C-G DRILLING CO (See GALLOWAY DRILLING CO)
CRC MALLARD WELL INC PO Drawer 51498 OCS Lafayette LA 70505 318-233-4922
CACTUS DRILLING CO 13747 Montfort Ste 300 Dallas TX 75240 214-934-3333
CACTUS DRILLING CORP PO Drawer 2800 Midland TX 79702 915-563-2500 403-263-5670
CALIFORNIA PROD SERV INC 19431 S Santa Fe Ave PO Box 4489 Compton CA 90224 213-639-7074
CAM DRILLING INC PO Box 2755 Abilene TX 79604 915-672-2551
CAPE DRILLING CO PO Box 756 Tyler TX 75710 214-593-8255
CARDINAL DRILLING CO PO Box 1077 Billings MT 59103 406-248-7324
CARTER DEVELOPMENT CORP 8609 NW Plaza Ste 440 Dallas TX 75225 214-521-9580
CARTER LAND & CATTLE CO PO Box 814 Chanute KS 66720 316-431-2080
CASTER WELL DRLG INC Forest Ave Ext Jamestown NY 14701 716-484-7436
M L CATHEY DRILLING INC PO Box 878 Mills WY 82644 307-472-7134
CHALLENGER DRILLING Box 5710 Station "L" Edmonton Alberta T6C 4G2 Canada 403-955-7788
CHALLENGER DRILLING INC 2515 Kelly Lane Houston TX 77066 713-893-9755
CHAPMAN DRILLING CO 3050 Post Oak Blvd Ste 350 Houston TX 77056 713-961-1107
CHEROKEE DRILLING & DEV CORP PO Box 2381 Midland TX 79702 915-563-1516
CHESLEY PRUET DRILLING CO PO Box 31 El Dorado AR 71730 501-863-7196
CHEYENNE DRILLING 515 RH Garvey Bldg Wichita KS 67202 316-687-5471
CHICO DRILLING CO 808 Commerce Bldg Fort Worth TX 76102 817-336-8688
CIMARRON OPERATING CO PO Box 21600 Oklahoma City OK 73156 405-848-2437
CINCO DRILLING CO 211 Highland Cross Ste 200 Houston TX 77073 713-443-3100 512-672-7983
CIRCLE BAR DRILLING CO (See QUARLES DRILLING CO)
CIRCLE C DRILLING CO Rte 4 Box 88 RB Richmond TX 77469 713-341-0922
CLEVELAND DRILLING CO 3131-A Fairhaven Dr Bakersfield CA 93308 805-589-5183
CLIFFS DRILLING CO 2-Allen Center Ste 3150 Houston TX 77002 713-651-9426
COASTAL DRILLING CO 2157 Mohawk St PO Box 5787 Bakersfield CA 93388 805-589-0210
COLEMAN DRILLING CO PO Drawer 3337 Farmington NM 87401 505-325-6892
COLLIER DRILLING CORP PO Box 271 Artesia NM 88210 505-746-3596
COMANCHE DRILLING CO PO Box 636 Cut Bank MT 59427 406-873-5731
COMET DRILLING CO Box 51529 Lafayette LA 70505 318-233-0414
COMPADRE DRILLING & EXPLORATION CORP PO Box 97 Ardmore OK 73401 405-223-3127

C (Cont'd)

CONTINENTAL DRILLING CO 1101 E SE Loop 323 Ste 640 Tyler TX 75703 214-561-5313
CORKY DRILLING CORP PO Box 1267 Big Spring TX 79720 915-263-3660
CORPUS CHRISTI DRILLING CO PO Box 8400 Corpus Christi TX 78412 512-852-7642
COTHRUM DRILLING CO PO Box 18207 Dallas TX 75218 214-321-9115
CRAWFORD DRILLING CO Rte 3 Box 254 Brenham TX 77833 512-451-6447
CRESCENT DRILLING CO PO Box 626 Calhoun Rd Owensboro KY 42301 502-926-4656
CULVER DRILLING CO 3910 Cameron Lafayette LA 70506 318-269-0088
CYCLONE DRILLING INC PO Box 908 Gillette WY 82716 307-682-4161

D

D & D DRILLING CO PO Box 351 Ferriday LA 71334 318-757-3274
D & R DRILLING INC PO Box 4431 Odessa TX 79760 915-563-3550
D B DRILLING CORP 100 Chestnut Abilene TX 79602 915-672-2841
D B DRILLING CORP SHREVEPORT DIV PO Box 1735 Shreveport LA 71166 318-227-8313
DNB DRILLING INC 515 RH Garvey Bldg Wichita KS 67202 316-637-5471
DOC-NCC DRILLING CO PO Box 235 Yatesboro PA 16263 412-783-7144
DAHLQUIST DRILLING INC PO Box 602 Bakersfield CA 93302 805-327-1275
DAMAC DRILLING INC PO Box 1164 Great Bend KS 67530 316-792-1353
D L DAVIS DRILLING CO PO Box 570 Mt Carmel IL 62863 618-262-7624
DAWN OILFIELD OPERATIONS LTD 2701 S Prospect Oklahoma City OK 73129 405-677-6601
DEAN DRILLING CO PO Box 327 Cherokee OK 73728 405-596-3509
DECCA DRILLING CO 700 American Tower Shreveport LA 71101 318-227-8342
DELTA DRILLING CO PO Box 2012 Tyler TX 75710 214-595-7700
DEVONIAN DRILLING CO 500 W Wilson Bridge Rd Ste 300 Worthington OH 43085 614-885-2268
DIAMOND M LAND DRLG PO Box 45858 Houston TX 77045 713-433-4551
DIATOM DRILLING CO PO Box 5004 Borger TX 79007-5004 806-273-3763
DIXILYN-FIELD DRILLING CO PO Box 4251 Houston TX 77210 713-877-8850
DIXON DRILLING CO PO Box 2773 Abilene TX 79604 915-676-8564
DOUGLAS DRILLING INC 805 T & P Lane Abilene TX 79602 915-676-5551
DRILCON INC 9099 Westheimer Ste 309 Houston TX 77063 713-780-8772
DRILLERS INC 5629 FM 1960 W Ste 202 Houston TX 77069 713-893-1020
DRILLTECH INC PO Box 31350 2 Northpark E Ste 800 Dallas TX 75231 214-369-6699 214-363-9705
DUAL DRILLING CO PO Box 240 Wichita Falls TX 76307 817-723-2127
DUKE DRILLING CO PO Box 823 Great Bend KS 67530 316-793-8366
DUNNE-GARDNER PETROLEUM INC 200 W Douglas Ste 250 Wichita KS 67202 316-265-1611
DURKEE DRILLING INC 2950 N Loop West Ste 1040 Houston TX 77092 713-957-1111

E

E & H DRILLING CO PO Box 1058 Graham TX 76046 817-549-0370
EAGLE DRILLING INC PO Box 8609 Wichita KS 67208 316-682-5513
EAGLE PRODUCTION & DRILLING SERV 3626 N Hall St Dallas TX 75219 214-521-0021
EARL & SONS DRILLING INC Box 3 Cedar Crest NM 87008 505-281-3880
EASON OIL CO Sub of ITT 2601 NW Expwy Oil Center East Ste 1100E Oklahoma City OK 73102 405-848-8711
EDCO DRILLING CO PO Box 645 El Dorado KS 67042 316-321-9285
EDSCO DRILLING CORP PO Box 591 Hays KS 67601 913-625-6086
EDWARDS WELL SERV 7001 Fruitvale Extension Bakersfield CA 93308 805-589-0111
ELENBURG EXPLORATION INC PO Box 1850 Hwy 2 W Havre MT 59501 406-265-5811
ELJAY DRILLING CORP 8955 Katy Fwy Ste 101 Houston TX 77024 713-932-6771
ELTEX DRILLING CONTRACTORS INC PO Box 4750 Victoria TX 77903 512-576-5281
ENERGY DRILLING CO PO Box 905 Natchez MS 39120 601-446-5259
ENERGY SEARCH DRILLING CO PO Box 190 Farmington NM 87401 505-326-1135
ENERGY SERVICES CORP 4273 Corporate Way Mt Pleasant MI 48858 517-773-4922
ENOPCO 12201 Merit Dr Ste 1100 Dallas TX 75251 214-387-2805
EQUITY DRILLING CO PO Box 369 Dewey OK 74029 918-534-1700
EXCELL DRILLING CO 4643 Wadsworth Blvd Wheatridge CO 80033 303-424-1711
EXETER DRILLING NORTHERN INC PO Box 17349 TA Denver CO 80217 303-861-0181
EXETER DRILLING SOUTHERN INC 144 Elk Place Ste 1502 New Orleans LA 70112 504-581-1498
EXPLORER DRILLING CO PO Box 53897 Lafayette LA 70505 318-988-2590

F

F & N DRILLING CO PO Box 6854 Odessa TX 79762 915-367-1028
F-W DRILLING CO 4350 S Treadaway Abilene TX 79602 915-695-2064
FWA DRILLING CO PO Box 419 Wichita Falls TX 76307 817-322-0761
FAIRMAN DRILLING CO PO Box 288 Dubois PA 15801 814-371-8410
FAITH DRILLING CO PO Box 7 Houston TX 77001 713-524-7411
FALCON DRILLING CO 1700 SE 22 Second Oklahoma City OK 73129 405-670-3161
JOHN O FARMER INC PO Box 352 Russell KS 67665 913-483-3144
FARNSWORTH & KAISER DRILLING CO 13 S Seneca Newcastle WY 82701 307-746-2591

F (Cont'd)

FAULK DRILLING CO PO Box 429 Breckenridge TX 76024 817-559-3744
FELDERHOFF BROS DRILLING CO PO Box 739 Gainesville TN 76240 817-665-0396
FINLEY OIL WELL SERVICE INC (See RDC/FINLEY)
FISCUS DRILLING CO Route 1 Box 572-A Big Spring TX 79720 915-393-5211
FISHER DRILLING CORP 10 E Third St Ste 520 Tulsa OK 74103 918-582-4457
FLOURNOY DRILLING CO PO Box 491 Alice TX 78332 512-668-8364
FOREX NEPTUNE AND/OR AFFILIATES 20 Ave Rapp BP 111 07 75326 Paris Cedex 07 France 555-95-34
FORWEST INC 910 16th St Ste 408 Denver CO 80202 303-573-1661
FOSSIL DRILLING CORP 4334 NW Expy Ste 121 Oklahoma City OK 73116 405-840-9255
FOUR CORNERS DRILLING CO PO Box 1067 Farmington NM 87401 505-327-0322
FRANCE DRILLING CORP 700 Travis Place Shreveport LA 71101 318-221-3434
FRANKLIN DRILLING INC PO Drawer 1237 Graham TX 76046 817-549-5661
FREEMAN DRILLING CO 251 N Water Ste 10 Wichita KS 67202 316-263-7049
FRIO DRILLING CO 1216 Guaranty Bank Plaza Corpus Christi TX 78475 512-883-8555

G

G-E DRILLING CO PO Box 3155 4401 Lilac St Victoria TX 77904 512-578-5245
GCO DRILLING CO PO Box 3134 Abilene TX 79604 915-673-4731
GABBERT-JONES INC 830 Sutton Place Wichita KS 67202 316-263-6209
GALLAGHER DRILLING INC PO Box 3046 Evansville IN 47730 812-425-8256
GALLOWAY DRILLING CO 340 Broadway Plaza Bldg 105 S Broadway Wichita KS 67202 316-263-1793
GARNETT DRILLING LTD 814-603 Seventh Ave SW Calgary Alberta T2P 2T5 Canada 403-262-7906
GARY DRILLING CO 7001 Fruitvale Extension Bakersfield CA 93308 805-589-0111
GEAR DRILLING CO 470 Denver Club Bldg Denver CO 80202 303-623-4422
GENERAL WELL SERV INC 118 E Main Box 308 Cut Bank MT 59427 406-873-5081
GIBSON DRILLING CO PO Box 1540 Kilgore TX 75662 214-984-5068
J W GIBSON WELL SERVICE CO 3025 S Parker Rd Ste 711 Aurora CO 80014 303-752-2527
GLASSCOCK DRILLING INC PO Box 51716 OCS Lafayette LA 70505 318-232-8620
GLENDEL DRILLING CO PO Box 765 Abbeville LA 70510 318-898-1637
GLOBE DRILLING CO 1212 The Peoples Plaza Tower Tyler TX 75702 214-593-0281
GOLD STAR DRILLING PO Box 1048 Cushing OK 74023 918-225-6188
GOLDEN STATE DRILLING INC 3312 Fruitvale Ave Bakersfield CA 93308 805-589-0730
GOLDRUS DRILLING CO PO Box 4394 Houston TX 77210 713-658-9271
GRACE-BOMAC DRILLING 10403 W Colfax Ste 700 Lakewood CO 80215 303-234-1444
GRACE/MILLER DRILLING Rte 5 Box 450 Fort Smith AR 72901 501-646-3481
GRACE/TRG DRILLING CO 3300 NE 60th St Oklahoma City OK 73121 405-478-4880
GRAND DRILLING 920 Hamilton Bldg Wichita Falls TX 76301 817-723-2422
GRAVES DRILLING CO 910 Union Center Wichita KS 67202 316-265-7233
GREAT SOUTHERN OIL & GAS CO PO Box 52707 Lafayette LA 70505 318-233-4400
GREEN DRILLING CO PO Box 667 Gillette WY 82716 307-686-1381
GREY WOLF DRILLING CO 2000 S Post Oak Rd Ste 1730 Houston TX 77056 713-626-1373
GUFFEY-SCHLENSKER DRILLING CORP PO Box 1330 Richardson TX 75080 214-231-8551
GUTHRIE McLAREN DRILLING LTD 14630 119th Ave Edmonton Alberta T5L 2P2 Canada 403-455-3191
GWALTNEY DRILLING CO PO Box 520 Washington IN 47501 812-254-5085

H

H & S DRILLING CO 320 S Boston Ste 2000 Tulsa OK 74103 918-587-8163
H S ENERGY/SENIOR DRILLING CO 9400 N Central Ste 407 Dallas TX 75231 214-363-7163
H-30 DRILLING INC 251 N Water Ste 10 Wichita KS 67202 316-263-2043
HACK DRILLING CO PO Box 5108 Abilene TX 79608 915-692-4111
HAMM DRILLING INC Box 17 One Perry Plaza Perry KS 66073 913-597-5111
HARKINS & CO PO Box 1940 Alice TX 78332 512-883-3022
HARPEL DRILLING CO PO Box 2811 Casper WY 82602 307-265-9193
HARPER-TURNER DRILLING 904 Hightower Bldg Oklahoma City OK 73130 403-232-3241
HARRIS DRILLING CO Box 99 Hwy 15 Grayville IL 62844 618-375-2211
HARRIS WELL SERVICE INC PO Drawer 949 Eunice LA 70535 318-457-3376
H F HATCHER & SON PO Box 167 Smackover AR 71762 501-725-2436
HEARTLAND DRILLING INC 600 One Main Place Wichita KS 67202-1399 316-265-9723
HELMERICH & PAYNE INTL DRILLING Utica at 21st St Tulsa OK 74114 918-742-5531
HELTER SKELTER DRILLING CORP PO Box 5745 Abilene TX 79605 915-695-3670
HEMPHILL CORP 4834 S 83rd E Ave Tulsa OK 74145 918-622-5133
HENLEY DRILLING CO 2900 First Natl Bank Bldg Ste 2420 Dallas TX 75202 214-749-0847
HERB EXPLORATION PO Box 1934 Abilene TX 79604 915-672-1291
HI TOWER DRILLING (See APOLLO DRILLING)
HICKMAN DRILLING CO PO Box 1467 Woodward OK 73801 405-256-8688
HIGHBRIDGE DRILLING CO 2113 9th St Wichita Falls KS 76301 817-723-1166
HILLIN DRILLING CO PO Box 152 Odessa TX 79760 915-563-3560
W B HINTON DRILLING CO 1805 N Jefferson St Mt Pleasant TX 72455 214-572-8777
HOLLIDAY DRILLING INC PO Box 3489 Midland TX 79702 915-697-2208
HONDO DRILLING CO PO Drawer 2516 Midland TX 79702 915-682-9401

H (Cont'd)

HONEYMON DRILLING CO (See SANTA FE DRILLING-MID CONTINENT)
HOUTECH DRILLING 8700 Commerce Park Dr Ste 150 Houston TX 77036 713-494-5151
HOWELL DRILLING INC 635 Milam Bldg San Antonio TX 78205 512-227-5283
LEONARD HUDSON DRILLING CO PO Box 1876 Pampa TX 79065 806-665-1816
HUGHES DRILLING CO Box 6001 Enid OK 73702 405-234-7222
HUNNICUTT CAMP DRILLING CO PO Box 399 Rio Vista CA 94571 707-374-2425
CLINT HURT & ASSOCIATES INC PO Box 1973 Midland TX 79702 915-683-6381
HUSKY DRILLING CO 555 N Woodlawn Ste 114 Wichita KS 67208 316-263-7904
HUSSAR DRILLING 1200 McFarlane Tower 700 Fourth Ave SW Calgary Alberta T2P 3J4 Canada 403-265-6982
HYLTON DRILLING CO 7700 Downing Rd Bakersfield CA 93308 805-589-2062

I

I X DRILLING CO PO Drawer 835 Stephenville TX 76401 817-965-7818
IBIS LTD 105 S Rusk Ste 216 Kilgore TX 75662 214-983-2538
INLAND WELL SERV INC PO Box 488 Abbeville LA 318-893-3486
INTERNATIONAL PETROLEUM SERV CO PO Box 547 Rte 6 N Sheffield PA 16347 814-968-3295
IRON DRILLING CO PO Box 3525 3201 S Van Buren Enid OK 73701 405-234-1292

J

J & C DRILLING CO PO Box 216 Refugio TX 78377 512-526-2376
J & W DRILLING CO Route 3 Gorman TX 76454 817-734-2665
J 3 DRILLING CO First City Bank Tower Corpus Christi TX 78477 512-881-9773
J W DRILLING CO 200 E First St Ste 500 Wichita KS 67202 316-263-5924
J-V DRILLING CO 4445 Commerce St Evansville IN 47710 812-424-3571
JFP WELL SERVICE INC 13231 Champion Forest Dr Ste 210 Houston TX 77069 713-893-4464
JHJ DRILLING CO 333 North Belt East Ste 620 Houston TX 77060 713-999-4980
JAY-BOY 1-SUNFLOWER DRLG PARTNERSHIP (See SUNFLOWER DRLG PARTNERSHIP)
JAY-LAN CORP 207 W 12th St Hays KS 67601 913-628-1316
JOHNN DRILLING CO PO Box 6189 Odessa TX 79762 915-563-1280
JOHNSON-BATES DRILLING CO PO Box 128 Konawa OK 74849 405-925-3256
JONES DRILLING CO PO Box 665 Albany TX 76430 915-762-3652
LOYD JONES DRILLING CO PO Box 816 Perryton TX 79070 806-435-6871
JONES DRILLING CORP PO Box 1185 Duncan OK 73533 405-255-1191
JUSTISS OIL CO PO Drawer N Jena LA 71342 318-992-4111

K

K B DRILLING CO PO Box 1848 Harve MT 59501 406-265-1407
K B DRILLING & PRODUCTION PO Box 1244 Taft CA 93268 805-765-5180
KANDRILCO INC Bldg 1 Ste 207 555 N Woodlawn Wichita KS 67208 316-681-1623
KANSAS DRILLING & WELL SERV INC 203 S Third Marion KS 66861 316-382-3734
KAY DRILLING CO PO Box 1622 Ponca City OK 74602 405-765-2406
KELLEY & KERR DRILLING CO 15119 Memorial Dr Ste 100 Houston TX 77079 713-870-8774
K L KELLOGG & SONS PO Box 7053 4220 Long Beach Blvd Long Beach CA 90807 213-422-1247
KENAI DRILLING OF NEW MEXICO INC PO Box 1636 Hobbs NM 88241-1636 505-392-7528
KENAI DRILLING OF TEXAS INC PO Box 6725 Odessa TX 79762 915-362-2323
KENAI DRILLING ROCKY MOUNTAIN INC PO Box 1198 Mills WY 82644 307-472-5122
KENAI DRILLING WEST COAST INC PO Box 2248 Orcutt CA 93454 805-928-1701
KENDALL DRILLING CO 3112 E Powell Evansville IN 47715 812-477-5535
KENTING DRILLING CO LTD One Denver Place Ste 1000 999-18th St Denver CO 80202 303-893-1383
KING DRILLING CO Route 1 Box 9 Canadian TX 79104 806-323-6664
KINGERY DRILLING CO PO Box 1588 Ardmore OK 73401 405-223-6823
I E KOCH DRILLING CO PO Box 581 Floresville TX 78114 512-393-6711

L

L & G DRILLING CO PO Box 35 Mt Pleasant MI 48858 517-772-3083
L & M DRILLING INC PO Box 647 Artesia NM 88210 505-748-2205
L & R DRILLING CO PO Box 936 Pierre SD 57501 605-224-8393
L D DRILLING CO PO Box 324 Great Bend KS 67530 316-793-3051
LLL DRILLING CO PO Box 188 Bloomfield NM 87413 505-632-8045
LA RUE DRILLING CO PO Box 202 Artesia NM 88210
LADRIDO DRILLING CO 4600 W Hwy 80 Midland TX 79703 915-694-2546
LAGERSEN DRILLING CO 302 Beck Bldg Shreveport LA 71101 318-227-9939
LANDIS DRILLING CO PO Box 3579 One Marienfeld Place Ste 350 Midland TX 79703 915-683-4151
LANDMARK ENERGY CORP PO Box 18595 7701 E Kellogg Ste 4 Wichita KS 67218 316-685-1402
LANEX DRILLING CO 4013 NW Expwy Oklahoma City OK 73116 405-840-5022
LEROY LANGE DRILLING CO 1102 Montana Big Lake TX 76932 915-465-4751
D R LAUCK OIL CO 221 S Broadway Ste 400 Wichita KS 67202 316-363-8267
LAYTON OIL CO PO Box 263 Independence KS 67301 316-331-1150
LEBEN DRILLING CO 105 S Broadway Ste 640 Wichita KS 67202-4260 316-264-2375
LEE DRILLING INC 4802 Derrick Dr Abilene TX 79601 915-677-3566
LEEMAN DRILLING CO 1400 Fifty Penn Place Oklahoma City OK 73118 405-842-1622

L (Cont'd)

DAN LESTER DRILLING CO PO Drawer N Jefferson TX 75657 214-665-2511
LIGHTNING DRILLING & CONSTR CO PO Box 1159 Henderson KY 42420 502-826-3968
LINC DRILLING CO 1355 Pennsylvania St Denver CO 80223 303-832-3383
LIN-MOUR DRILLING CORP 1411 13th St Wichita Falls TX 76301 817-322-8550
LITTLE-DEUTAG DRILLING INC PO Box 1509 2007 N Commerce Ardmore OK 73402 405-226-7620
LOFFLAND BROS CO PO Box 2847 Tulsa OK 74101 918-622-9330
LOGAN DRILLING CO PO Box 1622 Enid OK 73702 405-233-5048
LOHMANN DRILLING CO 18 NW 45th St Evansville IN 47708 812-428-4180
LORD DRILLING CO 14618 W Sixth Ave Goldan CO 80401 303-279-2471
LOUISE DRILLING CO PO Box 272 Louise TX 77455 713-648-2641
LOWE DRILLING CO PO Box 1368 Albany TX 76430 915-762-2530
LUKE GRACE CO 710 Petroleum Bldg Wichita Falls TX 76301 817-723-2187
LYNX DRILLING CO PO Box 13300 Arlington TX 76013 817-261-4181

M

M G F DRILLING CO-HOUSTON 2626 Richmond Houston TX 77098 713-526-9236
M G F DRILLING CO-LAFAYETTE PO Box 938 Scott LA 70583 318-237-6161
M G F DRILLING CO-MIDLAND PO Box 370 Midland TX 79701 915-684-7121
M N D DRILLING CORP-NORTHERN DIV PO Box 248 Bridgeport TX 76026 817-683-5106
M N D DRILLING CORP-SOUTHERN DIV PO Box 109 Magnolia TX 77355 713-356-8280
MOXA DRILLING CO 106 W Eighth McCook NE 69001 308-345-2945
MAGEE-POOLE DRILLING CO PO Box 2000 Alice TX 78332 512-664-1891
MAGIC CIRCLE DRILLING CO 4141 Northwest Expwy Oklahoma City OK 73116 405-843-6654
R L MANNING CO 1700 Broadway Ste 2200 Denver CO 80290 303-839-1977
MAR-TAY DRILLING CO PO Box 1216 Drumright OK 74030 918-352-3802
MARION DRILLING & SERVICES CO PO Box 3027 Mobile AL 36652 205-626-3924
MARLIN DRILLING CO 1333 West Loop South Ste 780 Houston TX 77027 713-627-1161
MARLIN-WEST DRILLING CO 3025 Gibson St PO Box 551 Bakersfield CA 93302 805-327-8304
MATAGORDA MARINE DRILLING CO PO Box 10307 Corpus Christi TX 78410 512-289-1366 512-882-6071
MAXWELL DRILLING CO PO Box 1679 Bowie TX 76230 817-872-5455
MAXWELL HERRING DRILLING CORP PO Box 1297 Tyler TX 75710 214-593-1737
McALLISTER DRILLING INC 251 North Water Ste 10 Wichita KS 67202 316-263-6972
McBAY OIL & GAS INC PO Box 1085 Crockett TX 75835 713-544-5168
McCONNELL DRILLING CO 111 Frio St Lockhart TX 78644 512-398-2627
J W McCUTCHEN DRILLING CO 912 Oil & Gas Bldg Wichita Falls TX 76301 817-322-9231
McLACHLAN DRILLING CO PO Box 548 Evart MI 49631 616-734-2158
McLENNAN DRILLING CO PO Box 6 Nowata OK 74048 918-273-1265
McMURREY PETROLEUM INC PO Box 1899 Kilgore TX 75662 214-984-3578
McVAY DRILLING CO 308 Philtower Bldg Tulsa OK 74103 918-584-5472
MEGARGEL DRILLING CO PO Box 356 Megargel TX 76370 817-563-2311
MELLON DRILLING CO 133 W Concho Ste 103 San Angelo TX 76901 915-655-8951
MELTON DRILLING CO 7101 Downing Ave Bakersfield CA 93308 805-587-0521
MENDENHALL DRILLING CO PO Box 302 Lamont OK 74643 405-388-4444
MERCURY DRILLING CO 1701 SE 25th St Oklahoma City OK 73129 405-672-4441
MERIT DRILLING CO PO Box 79667 Houston TX 77079 713-493-1001
MESA DRILLERS PO Box 108 Lubbock TX 79408 806-794-3248
MESA DRILLING CO PO Box 1481 Abilene TX 79601 915-673-4787
MICHIGAN CONSOLIDATED GAS CO (See ENERGY SERVICES CORP)
MID-AMERICA DRILLING & EXPL INC PO Box 2515 Midland TX 79702 915-686-0134
MID ATLANTIC OIL CO DRILLING DIV PO Box 198 Belle Valley OH 43717 614-732-5674
MIDCO DRILLING INC 125 N Market Ste 1250 Wichita KS 67202 316-265-1808
MILLER CONTRACT DRILLING INC PO Box 478 Livingston TN 38570 615-823-6425
MILLER DRILLING CO Rte 5 Box 450 Fort Smith AR 72901 501-646-3481
MILLER EXPLORATION CORP PO Box 246 Allegan MI 49010 616-673-2117
MIN-TEX DRILLING CORP PO Box 1136 Mineral Wells TX 76067 817-325-9591
GEORGE N MITCHELL DRILLING CO PO Box 111 Airport Rd Carmi IL 62821 618-382-2343
MOLEN DRILLING CO PO Box 2222 Grand Bldg Ste 500 Billings MT 59103 406-252-2591
MONTEREY DRILLING CO 11 W Del Mar Ste 203 Pasadena CA 91105 213-792-4078
MONTGOMERY DRILLING CANADA LTD 960-700 Fourth Ave SW Calgary Alberta T2P 3J4 Canada 403-232-1644
MONTGOMERY DRILLING CO PO Box 2508 Bakersfield CA 93303 805-393-9620
MONTGOMERY MOUNTAIN DRILLING PO Box 1180 Mills WY 82644 307-472-3001
MORAN BROS INC PO Box 4502 Houston TX 77210 713-820-1865
MORAN DRILLING CORP PO Box 4502 Houston TX 77210 713-820-1865
E W MORAN DRILLING CO PO Box 7519 Wichita Falls TX 76307 817-322-7891
MORANCO PO Box 1860 Hobbs NM 88240 505-397-3511
MORRISON DRILLING & PRODUCING CO One Energy Square Ste 1-LB Abilene TX 79601 915-577-8523
MORROW DRILLING CO PO Box 4936 Odessa TX 79760 915-333-2875
MOSLEY WELL SERVICE INC PO Box 970 Minden LA 71055 318-377-2393
MURCO DRILLING CORP 1900 Beck Bldg Shreveport LA 71101 318-221-7373
MURFIN DRILLING CO 617 Union Center Bldg Wichita KS 67202 316-267-3241
MURLYNSON DRILLING CO PO Drawer 1826 Alice TX 78332 512-664-4540
PETE MURPHY DRILLING CO PO Drawer 1876 Alice TX 78332 512-664-3807
MUTUAL OF AMERICA INC PO Drawer 1446 Santa Fe NM 87501 505-982-5501

N

N R G DRILLING INC PO Box 1157 Liberal KS 67901 316-624-1818
NECK DRILLING CO Bin X Taft CA 93268 805-769-8811
NL WELL SERVICE PO Box 488 Abbeville LA 70510 318-893-3486
NABORS ALASKA DRILLING INC Anglo Energy Co 4796 Business Park Blvd Ste 1 Anchorage AK 99503 907-278-2511
NABORS DRILLING LTD 324 Eighth Ave SW 1107 Home Oil Tower Ste 1107 TD Square Calgary Alberta T2P 2Z2 Canada 403-263-6610
NAVAJO DRILLING CO PO Box 128 Konawa OK 74849 405-925-3241
NELSON DRILLING & WELL SERV 1325 American Tower Shreveport LA 71101 318-221-6890
NEW & HUGHES DRILLING CO PO Drawer 1487 Natchez MS 39120 601-442-1607
NEW JERSEY DRILLING CO Rte 206, Box 8 Netcong NJ 07857 201-347-2269
NEW PROSPECT DRILLING CO PO Box 729 Greenwood AR 72936 501-996-6791
NICKLOS DRILLING CO PO Box 752 Eunice LA 70535 318-457-6103
NICOR DRILLING CO 500 Reunion Center 9 E Fourth St Tulsa OK 74103 918-587-5507
NIXON DRILLING CO PO Box 632 201 S Laurel St Luling TX 78648 512-875-2416
NOBLE DRILLING CORP 1924 S Utica Ste 600 Tulsa OK 74104 918-749-9901
JAMES R NORMAN DRILLING CO Rte 8 Box 305 Clarksville TN 37040 615-645-4361
NORTHEAST DRILLING CO Rte 4 Box 38-A Enid OK 73701 405-234-6771
NORTON DRILLING CO 606 Lubbock National Bank Bldg Lubbock TX 79401 806-747-3324
A N NORWOOD INC PO Box 310 Midland TX 79702 915-683-3972
NOWOTNY & CONLEY DRILLING CORP 1700 Buckner Square Ste 200 Shreveport LA 71101 318-227-0442

O

O'NEAL DRILLING CO PO Box 4660 Fort Worth TX 76106 817-625-8246
ELMER OELZE JR RR 1 Box 148 Nashville IL 62263 618-327-3807
OILWELL DRILLING INC PO Box 983 Graham TX 76046 817-549-6960
E L OLIVER DRILLING CO PO Box 25103 Oklahoma City OK 73125-0103 405-677-2461
OLSEN DRILLING CO 1616 Glenarm Place Ste 1305 Denver CO 80202 303-893-2221
ORIGINALA DRILLING CO 956 S Main Jacksboro TX 76056 817-567-3991
OWEN DRILLING CO PO Box 861 Magnolia AR 71753 501-234-6300
JACK OWENS SERV CO 1626 Del Dayo Dr Carmichael CA 95608 916-485-8995

P

P E P DRILLING CO PO Box 824 123 S 10th Mt Vernon IL 62864 618-242-2205
PRC DRILLING CO PO Box 1121 Corpus Christi TX 78403 512-289-6763
PADRE DRILLING CO 2501 Suntide Rd Corpus Christi TX 79410 512-241-2871
PAR-CO DRILLING INC PO Box 873 Natchez MS 39120 601-442-6421
PARKER DRILLING CO 8 E Third St Tulsa OK 74103 918-585-8221
PEARL EXPLORATION INC PO Box 2179 Alice TX 78332 512-664-2605
PENRICK DRILLING CO 1080 Petroleum Tower Corpus Christi TX 78474 512-887-9396
PENROD DRILLING CO 1407 Main St Dallas TX 75202 214-880-1700
PETERS DRILLING INC PO Box 742 Great Bend KS 67530 316-793-6721
PICKRELL DRILLING CO 110 N Market Ste 205 Wichita KS 67202 316-262-8427
PILGRIM DRILLING CO PO Box 35588 6733 S Yale Ave Tulsa OK 74136 918-494-0944
PLOTNER DRILLING CO 8101 NW 10th St Oklahoma City OK 73127 405-787-7234
POOL OFFSHORE PO Box 4271 Houston TX 77210 713-780-4999
GENE PORTER DRILLING CO PO Box 389 Cushing OK 74023 918-225-1563
POWER RIG DRILLING CO PO Box 52808 Lafayette LA 70505 318-234-4525
POZOS INTERNATIONAL DRILLING SERVICES CO PO Box 3339 9 Pozos Lane Conroe TX 77305 713-756-4161
PRAIRIE DRILLING CO 3333 Quebec Ste 10F Denver CO 80207 303-388-0909
PRECISION EXPL CO PO Box 278 Olney IL 62450 618-395-8148
J A PRICE & CO PO Box 4435 Odessa TX 79760 915-563-3139
T D PROVINS DRILLING CO PO Box 642 2113 Enterprise Dr Mt Pleasant MI 48858 517-773-6946
PRUET-RAM CO PO Box 31 El Dorado AR 71730 501-863-3612
PULLIAM DRILLING CO PO Box 1104 Woodward OK 73801 405-256-4000
PYRAMID OIL WELL SERV PO Box 3225 Santa Fe Springs CA 90670 213-944-6703

Q

QUANZA DRILLING INC 3824 N Meridian Ste 110 Oklahoma City OK 73112 405-942-7900
QUARLES DRILLING CO 2-3-4 Loyola Bldg Ste 505 New Orleans LA 70112 504-392-4191
QUARLES DRILLING CORP 7633 E 63rd Place Ste 500 Tulsa OK 74133 918-250-0515
QUINTEX DRILLING CO 1647 E Third St Tulsa OK 74120 918-587-7623

R

R R A INC 510 Hardage Center Wichita KS 67202 316-262-3411
R RIGS INC PO Box 99 Quinlan TX 75474 214-563-6771
R W I T DRILLING CO PO Box 551 324 W Main Holdenville OK 74848 405-379-5491
RDC/FINLEY PO Box 7296 Long Beach CA 90807 213-595-4505
ROKK DRILLING CO PO Box 207 Homer LA 71040 318-927-9658
RAINBOW DRILLING CO PO Box 1779 1108 N Kilgore St Kilgore TX 75662 214-984-5095
RAINS & WILLIAMSON OIL CO PO Box 911 Hays KS 67601 913-735-2215
RAM DRILLING CO PO Box 118 Browns IL 62818 618-446-5117
RANGE DRILLING CO 240 Page Ct 220 W Douglas Wichita KS 67202 316-265-6231
RAPAD DRILLING CO PO Box 31 El Dorado AR 71730 501-863-7196
RATLIFF DRILLING CO PO Box 988 Duncan OK 73533 405-255-2916
RAY RESOURCES CORP PO Box 203 Culloden WV 25510 304-743-9067
REBEL DRILLING CO PO Box 1151 Natchez MS 39120 601-446-7831
RED RIDER DRILLING CO (See R RIGS INC)
RED TIGER DRILLING CO 1720 Kansas State Bank Bldg Wichita KS 76202 316-263-2371
REMCO DRILLING 3000 E Hwy 80 Haughton LA 71037 318-949-4103
REPCO INC PO Box 325 Duncan OK 73533 405-252-3005
REPUBLIC DRILLING & SERV INC PO Box 73448 Dept F-284 Houston TX 77273 713-877-6777
REPUBLIC DRILLING CO (See RDC/FINLEY)
RESOURCE DRILLING INC PO Box 4341 Houston TX 77210 713-871-8550
RICHARDS-ARMSTRONG INC PO Box 1149 Bay City TX 77414 713-245-8389
RICHARDS DRILLING ASSOCIATES PO Box 1149 Bay City TX 77414 713-245-8389
RICHARDS DRILLING CO PO Box 1149 Bay City TX 77414 713-245-8389
RICHARDS DRILLING LTD II PO Box 1149 Bay City TX 77414 713-245-8389
RILEY DRILLING CO 907 Scurry Big Spring TX 79720 915-394-4454
RINE DRILLING CO 300 W Douglas Ste 600 Wichita KS 67202 316-267-1333
RIO COLORADO DRILLING CO 330 North Belt E Ste 100 Houston TX 77060 713-445-2231
RIO GRANDE DRILLING CO 2300 Tower Life Bldg San Antonio TX 78205 512-224-4572
ROBERSON DRILLING CO PO Box 1966 Ardmore OK 73402-1966 405-223-1277
ROBINSON BROS DRILLING CO 1413 25th St Woodward OK 73801 405-254-3361
ROBINSON DRILLING OF TEXAS PO Box 311 Big Spring TX 79720 915-267-5277
ROCKHOLD ENGINEERING INC PO Box 698 Great Bend KS 67530 316-729-2506
ROCKWELL DRILLING CO PO Box 993 400 W Fifth St Holdenville OK 74848
ROCKY MOUNTAIN DRILLING CO 10333 Southport Rd SW #415 Calgary Alberta T2W 3X6 Canada 403-259-6767
ROD RIC CORP PO Box 10847 Midland TX 79702 915-682-7890
J B RODEN DRILLING CO PO Box 880 Mills WY 82644 307-266-6552
ROSAMOND DRILLING CO PO Box 7656 Monroe LA 71203 318-323-7736
ROTARY DRILLING INC PO Box 5457 Tyler TX 75711 214-592-8174
ROWAN DRILLING-US 1900 Post Oak Tower Bldg 5051 Westheimer Houston TX 77056 713-621-7800
ROYAL DRILLING INC PO Box 1971 Ada OK 74820 405-332-1426
ROYCO DRILLING CO PO Box 681 Owensboro KY 42301 502-685-3687

S

S & T DRILLING NORTHERN LTD 24 NE 53rd Oklahoma City OK 73105 405-495-8044
SEE LAND DRILLING CORP PO Box 311 Magnolia MS 39652 601-249-3060
SH & J DRILLING CORP PO Drawer 888 Magnolia AR 71753 501-234-4600
SABRE DRILLING CO Div TRG Drilling Corp PO Box 1150 Cushing OK 74023 918-225-3502
SABRE INC 1215 24th St W #220 Billings MT 59102 406-656-0730
SAFARI DRILLING CORP PO Box 3236 Abilene TX 79604 915-677-2826
SAGE DRILLING CO 202 S St Francis Wichita KS 67202 316-263-6139
SAN PATRICIO CORP PO Box 966 Corpus Christi TX 78403 512-883-5241
SANDERS DRILLING CO PO Box 1086 New Iberia LA 70560 318-364-1537
SANDIA DRILLING CO 2500 Broadway Bldg Edmond OK 73034 405-340-0210
SANTA FE DRILLING CO PO Box 1401 Orange CA 92669 714-558-1300
SANTA FE DRILLING CO (MID-CONTINENT) PO Box 74506 4300 Highline Blvd Ste 356 Oklahoma City OK 73147 405-947-2319
SANTA FE DRILLING CO (WESTERN) PO Box 992 Odessa TX 79760 915-367-4181
SAWYER DRILLING & SERV INC 1300 American Tower Shreveport LA 71101 318-227-8150
SCANDINAVIAN MONTGOMERY DRILLING PO Box 2508 Bakersfield CA 93303 805-327-5736
SCHLENSKER DRILLING CORP PO Box 1330 Richardson TX 75080 214-231-8551
DON SCOTT DRILLING CO PO Box 177 Jonesville MI 49250 517-849-9237
JERRY SCOTT DRILLING CO PO Box 1488 319 N Harvey Rd Seminole OK 74868 405-382-2202
SEALY & CO 533 Castano San Antonio TX 78209 512-826-4520
SEARCH DRILLING CO 1900 First Oklahoma Tower 210 W Park Ave Oklahoma City OK 73102 405-236-5550
SENECA DRILLING CO 100 NW 63rd St Oklahoma City OK 73116 405-848-3388
SERVICE DRILLING CO Fourth Nat'l Bank Bldg Ste 1800 Tulsa OK 74119 918-582-9141
SERVICE DRILLING CO PO Box 5320 Borger TX 79007-5320 806-273-7573
SHARP DRILLING CO PO Box 1271 Midland TX 79702 915-683-3384
SHELBY DRILLING 5350 S Roslyn Ste 300 Englewood CO 80111 303-740-2200
R H SHELDON & SON INC 13213 TR 50 Dunkirk OH 45836 419-759-2351
SHIELDS DRILLING CO PO Box 709 Russell KS 67665 913-483-3141
SHULER DRILLING CO 3514 W Hillsboro El Dorado AR 71730 501-863-7234

S (Cont'd)

SIGNAL OILFIELD SERVICE INC 1616 Glenarm Place Ste 1200 Denver CO 80202 303-629-1050
SILVERADO DRILLING CO PO Box 911 Hays KS 67601 913-735-2215
SIMMONS DRILLING LTD 524 550 Sixth Ave SW Calgary Alberta T2P 0S2 Canada 403-263-7686
SITTON DRILLING CO 503 Lubbock National Bank Bldg Lubbock TX 79401 806-763-4442
SLAWSON DRILLING CO 200 Douglas Bldg Wichita KS 67207 316-263-3201
D SLEDGE DRILLING CORP First National Bank Ste 2301 Midland TX 79701 915-683-5261
SLOAN DRILLING CO 2825 E Skelly Dr Ste 827 Tulsa OK 74105 918-745-6570
SMART DRILLING CO 7060 S Yale Tulsa OK 74136 918-494-8725
SMITH & STOVALL DRILLING CO-OP PO Box 948 Elk City OK 73648 405-225-4455
SMITH BROTHERS DRILLING CO 5208 W Reno Ste 250 Oklahoma City OK 73127 405-947-6700
SMITH DRILLING CO PO Box 150 Rte 1 S Lawrenceville IL 62439 618-943-2342
CARL E SMITH PETROLEUM INC PO Box 4 Sandyville WV 25275-0004 304-273-9313
SNYDER DRILLING WELL SERV CO PO Box E Hwy 1 S Grayville IL 62844 618-375-2491
SOAPE DRILLING CO PO Box 1284 Billings MT 59103 406-252-1341
SOJOURNER DRILLING CORP PO Box 3234 Abilene TX 79604 915-672-2832
SOUTH TEXAS DRILLING CO 2211 NE Loop 410 Ste 100 San Antonio TX 78205 512-654-4085
SOUTHLAND DRILLING CO Rte 5 Box 121 Victoria TX 77901 512-578-3531
SPARTAN DRILLING INC PO Drawer 3759 Bryan TX 77805 713-775-7071
SPUR DRILLING INC 1100 NE Loop 410, Ste 438 San Antonio TX 78209 512-822-2649
STAHLCO DRILLING CO PO Box 2231 1013 W Eighth Amarillo TX 79105 806-376-5038
STERLING DRILLING CO 230 N Fourth St Sterling KS 67579 316-278-2131
STERLING DRILLING CO PO Drawer 3068 Midland TX 79702 915-685-3054
STEWART BROTHERS DRILLING CO PO Box 2067 Grants NM 87020 505-287-2986
STOEPPELWERTH DRILLING INC 1111 E "H" St McCook NE 69001 308-345-1766
M L STONE DRILLING CO PO Box 299 Saratoga TX 77585 713-833-2287
STRATA DRILLING INC PO Box 355 Great Bend KS 67530 316-793-7971
SUMPTER & BARKER DRILLING CO PO Box 1081 Stillwater OK 74076 405-372-4063
SUNDOWN DRILLING CO 1800 NE Loop 410 Ste 208 San Antonio TX 78217 512-822-2050
SUNFLOWER DRILLING PARTNERSHIP 100 S Main St Ste 210 Wichita KS 67202 316-262-0742
SWEETMAN DRILLING INC 410 One Main Place Wichita KS 67202 316-265-5561

T

T E K DRILLING CO 1224 Josey Lane Ste B Carrollton TX 75006 214-242-8314, 6402
T O T DRILLING CORP 5718 Andrews Hwy Odessa TX 79762 915-367-7361
T R G DRILLING CORP MID CONTINENT DIV (See GRACE/TRG DRILLING CO)
T-L DRILLING CO 414 W Phillips Ste 137 Conroe TX 77301 713-273-1480
TMBR DRILLING INC PO Drawer 10970 Midland TX 79702 915-563-1927
TWT EXPLORATION INC PO Box 1329 Park City UT 84060 801-649-8212
TAHOE DRILLING CO 4402 W Industrial Midland TX 79703 915-697-4173
TAYLOR DRILLING CO PO Box 597 Chehalis WA 98532 206-748-3445
TESORO DRILLING CO PO Drawer 2909 Laurel MS 39440 601-425-1481
TEXAS DRILLING CO PO Box 240 Abilene TX 79604 915-673-5024
TEXLAND DRILLING CORP (See D B DRILLING CORP)
TEXZONA DRILLING CO 21 Windmill Circle PO Box 6127 Abilene TX 79608 915-695-4963
THEISS DRILLING CO 1331 Oakhurst Wichita Falls TX 76302 817-766-0763
THOMAS DRILLING CO PO Box 400 Duncan OK 73533 405-252-5580
THOMPSON DRILLING CO 4 Corporate Dr Ste 102 Newport Beach CA 92660-7988 714-644-9292
THUNDERBOLT DRILLING INC PO Box 129 Winnsboro TX 75494 214-342-5221
TIERRA DRILLING CORP PO Box 3469 CPI Bldg Midland TX 79702 915-694-9553
TITAN DRILLING 7257 S Tucson Way Ste 110 Englewood CO 80112 303-694-2990 303-688-0602
TOLTEK DRILLING CO 340 Denver Club Bldg Denver CO 80202 303-571-1331
TOP DRILLING INC 1000 W Wilshire Oklahoma City OK 73116 405-521-9737
TRAFALGAR DRILLING CO PO Box 4396 Midland TX 79704 915-699-7067
TRANS-PAC DRILLING INC 600 One Main Place Wichita KS 67202-1399 316-265-0226
TRANSCONTINENTAL DRILLING INC DENVER DIV Anaconda Tower Ste 2700 Denver CO 80220 303-571-4800
TRANSCONTINENTAL DRILLING INC JACKSON DIV Jackson MS 39211
TRANSCONTINENTAL DRILLING INC MAGNOLIA DIV Magnolia AR 71753 501-234-5011
TRANSCONTINENTAL DRILLING INC SAN ANGELO DIV 3184 Executive Dr San Angelo TX 76903 915-653-3324
TRANSCONTINENTAL DRILLING INC SHREVEPORT DIV Shreveport LA 71101
TREND DRILLING CO PO Box 3310 Enid OK 73702 405-233-7838
TRI-J DRILLING CO PO Box 5338 Abilene TX 79605 915-698-8026
TRI-LAND DRILLING CO PO Box 18605 Oklahoma City OK 73154 405-528-1463
TRI-SERVICE DRILLING CO PO Drawer 70 Midland TX 79702 915-684-6641
TRIAD DRILLING Div UGI Development Co Grand Centre Bldg Ste 310 5400 N Grand Blvd Oklahoma City OK 73112
TRICON/B-E DRILLING CO Rte 5 Box 315 Longview TX 75601 214-758-5406
TRIDENT DRILLING INC 2701 Paton Way Bakersfield CA 93308 805-589-2012
TRIGG DRILLING CO PO Box 18605 Oklahoma City OK 73154 405-528-4456
TRUE DRILLING CO PO Drawer 2360 Casper WY 82602 307-237-9301
TUCKER DRILLING CO PO Box 1876 San Angelo TX 76901 915-655-6773
TWIN ARROW INC Box 948 Rangely CO 81648 303-675-8226

U

U R C DRILLING CORP 4141 Northwest Expy Oklahoma City OK 73116 405-842-1039
UNDERWATER GAS DEVELOPERS LTD PO Box 428 Port Colborne Ontario L3K 1B7 Canada 416-894-1731
UNDERWOOD OIL WELL SERV INC 731 Lakeshore Dr Monroe LA 71203 318-343-2665
UNION DRILLING INC PO Drawer 40 Buckhannon WV 26201 304-472-4610
UNIT DRILLING & EXPL CO 1101 Petroleum Club Bldg Tulsa OK 74119 918-582-9595
UNITED DRILLING DIV BALTIC DRILLING (TX) INC Rte 1 Box 294 Hwy 155 N Tyler TX 75708 214-877-3411

V

VAUGHN GOOD DRILLING INC PO Box 3744 Enid OK 73702 405-233-3899
VECO DRILLING INC PO Box 1705 2457 Industrial Blvd Grand Junction CO 81501 303-242-6912
VENTURE DRILLING CO PO Box 1353 848 E Main Cushing OK 74023 918-225-3269
VERNA CORP PO Box 6485 Midland TX 79701 915-563-4856
VI-ROI DRILLING CO PO Box 1624 Duncan OK 73533 405-255-9750
VIERSEN & COCHRAN DRILLING CO PO Box 19227 Oklahoma City OK 73144 405-681-6611
VISION DRILLING INC PO Box 2405 3506 W County Rd Hobbs NM 88240 505-392-3511
VISTA DRILLING CO 700 American Tower Shreveport LA 71101 318-227-8342

W

W E K DRILLING CO PO Box 1498 Roswell NM 88201 505-623-5070
W E S CORP PO Box 1329 Park City UT 84060 801-640-8212
W W CORP 220 N Main St Madisonville KY 42431 502-821-0087
EARL F WAKEFIELD INC 300 W Douglas Ste 500 Wichita KS 67202 316-264-2366
WARREN INTERSTATE DRILLING CO 906 Utica Tower Tulsa OK 74104 918-749-8361
WARRIOR DRILLING CO 5801 N Broadway Ste 200 Oklahoma City OK 73118 405-840-1783
WARTON DRILLING CO 8801 W County Rd Odessa TX 79762 915-362-0251
WEAL DRILLING CO PO Box 249 Hanson KY 42413-0249 502-322-3302
WELSH DRILLING & SERV INC (See DIAMOND M LAND DRLG)
WES-MOR DRILLING INC PO Box 1169 Graham TX 76046 817-549-3383
WES-TEX DRILLING CO PO Box 3739 Abilene TX 79604 915-677-9121
WESTBURNE DRILLING INC PO Box 13079 999-18th St #1860 Denver CO 80201 303-623-8800
WESTBURNE DRILLING CANADA LTD 200 535 Seventh Ave SW Calgary Alberta T2B 0Y4 Canada 403-233-6600
WESTERN WELL DRILLING INC 11299 Brighton Rd Henderson CO 80640 303-288-2247
WESTWIND DRILLING CO 1675 Broadway Ste 2260 Denver CO 80202
WHEATSTATE OILFIELD SERVICES INC PO Box 329 Pratt KS 67124 316-672-7514
WHELESS DRILLING CO 920 Commercial National Bank Bldg Shreveport LA 71101 318-222-3137
WHITE & ELLIS DRILLING INC 401 E Douglas Ste 500 Wichita KS 67202 316-263-1102
E E WHITEHEAD DRILLING CONTR PO Box 1255 Drumright OK 74030 918-352-2230
WILCOX DRILLERS INC PO Box F F Natchez MS 39120 601-446-5021
WILLBROS DRILLING INC PO Box 10727 Midland TX 79702 915-563-0221
WILLIAMS DRILLING CO 1300 Main St Ste 1530 Houston TX 77002 713-652-9106
WILLIAMS DRILLING CO OF SOUTH TEXAS PO Drawer 3050 Alice TX 78332 512-668-9867
WILLIS DRILLING CO PO Box 479 Edinburg TX 78539 512-383-3888
WILSON BROS DRILLING CO PO Drawer 53628 217 E Kaliste Saloom Rd Lafayette LA 70505 318-233-5950
LES WILSON INC PO Box 331 Carmi IL 62821 618-382-5091
WINTER DRILLING & EXPLORATION CO Rte 1 Box 11-A Nowata OK 74048 918-273-1874
WOOLF & MAGEE INC PO Box 6566 Tyler TX 75711 214-561-4051
WYOMING WELL SERV INC PO Box 340 Cody WY 82414 307-587-4249

Y

YOUNG DRILLING CO PO Box 717 Bloomfield Hwy Farmington NM 87401 505-327-5218

Z

ZENITH DRILLING CORP Fourth Financial Center Ste 505 Wichita KS 67202 316-265-6697

Petroleum Engineer® INTERNATIONAL

U.S. Contract Rotary Land Drilling Rigs

ALABAMA

Contractor	Rig No.	Type Power	Total HP All Main Mud Pumps	Drawworks Make and Model	Total HP Available to Drwwks	Rated Depth with 4½" Pipe
CHAMBERS						
Miller Contract Drlg	23	dsl		Ingersoll T4	400	2,800
CHOCTAW						
Murco Drlg	14	dsl-scr	3200	GAR-DEN 1500	2800	25,000
Tesoro Drlg	5		2000	NATL 80B	1650	15,000
CLARK						
Penrod Drlg	106	dsl	1575	NATL 80B	1760	15,000
ESCAMBIA						
Bay Drlg	2	dsl	2500	NATL 110M	2500	20,000
Exeter Drlg Southern	27	dsl	2800	GAR-DEN 1500	2800	25,000
Marion Drlg	7	dsl	2400	EMSCO C1	2400	20,000
Penrod Drlg	19	dsl	2800	NATL 1320M	3425	25,000
	15	dsl	3000	GAR-DEN 2100	2200	30,000
FAYETTE						
Lohmann Drlg	9	dsl	300	NATL T12	300	3,500
SEE Land Drlg	2	dsl	720	UNIT 15	300	4,000
LAMAR						
Apollo Drlg Inc	1	dsl	500	NATL 370	550	10,500
MOBILE						
Helmerich & Payne Intl Drlg	71	dsl	1830	NATL 1320M	1830	23,000
Nicor Drlg	79	dsl-mech	2000	WILSON Titan	1350	14,000
Noble Drlg	25	dsl	3300	NATL 1625DE	3135	30,000
Penrod Drlg	7	dsl	3425	NATL 1625M-6	2200	30,000
	9	dsl	2600	NATL 1320M	3425	25,000
	6	dsl	3425	NATL 1625M-6	2200	30,000
Rapad Drlg	3	dsl-elec	4000	GAR-DEN 1500E	2000	25,000
MONROE						
Chesley Pruet Drlg	14	dsl	3600	GAR-DEN 1500M	3600	25,000
Exeter Drlg Southern	26	dsl	2500	95 BRWSTR	2500	17,500
Nicor Drlg	77	dsl-mech	2300	NATL 100	750	16,000
PICKENS						
Lohmann Drlg	8	dsl	300	NATL 32	550	7,500
SHELBY						
Delta Drlg	66	dsl-elec	2600	EMSCO Electrohoist II	3456	18,000
SUMTER						
Rapad Drlg	2	dsl	1600	EMSCO GB500	1200	14,000

ALASKA

Contractor	Rig No.	Type Power	Total HP All Main Mud Pumps	Drawworks Make and Model	Total HP Available to Drwwks	Rated Depth with 4½" Pipe
UNDESIGNATED						
Alaska United Drlg	1	dsl-elec	2000	OILWELL 840E	1500	18,000
ANCHORAGE						
Arctic Alaska Drlg	7	dsl-elec	3400	OILWELL E2000	2000	25,000
Nabors Alaska Drlg	28-E	dsl-elec	2000	EMSCO Electrohoist IIC	3700	25,000
Parker Drlg	122	dsl	1800	OIME SL1500	1800	18,000
NORTH SLOPE						
Alaska United Drlg	2	dsl-elec	3200	OILWELL 2000	2000	20,000
	WWS-1	dsl-elec	1000	OILWELL 700E	700	10,000
	3	dsl-elec	3200	OILWELL 2000E	2000	20,000
Arctic Alaska Drlg	5	dsl-elec	3400	OILWELL E2000	2000	25,000
	6	dsl-elec	3400	OILWELL E2000	2000	25,000
	4	dsl-elec	3400	OILWELL E2000	2000	25,000
Nabors Alaska Drlg	27-E	dsl-elec	3200	EMSCO Electrohoist	4000	25,000
	22-E	dsl-elec	3200	EMSCO IIC Electrohoist	3200	25,000
	17	dsl	2000	OILWELL 860	2475	19,000
	25	dsl	2000	NATL 110	2475	20,000
	18-E	dsl-elec	2000	EMSCO Electrohoist	3200	25,000
	1-ES	dsl-elec	500	EMSCO Electrohoist CII	2400	20,000
	26-E	dsl-elec	3200	EMSCO Electrohoist	4000	25,000
Parker Drlg	135	dsl	1400	OIME TBA2000	1400	15,000
	147	dsl	1400	OIME TBA2000	1400	15,000
	176	elec	3200	OIME 2000E	2000	20,000
	141	dsl	1800	OIME TBA2000	1800	18,000
	191	dsl	3200	OIME 3000E	3000	20,000
	128	dsl	1400	OIME TBA2000	1400	15,000
	123	dsl	1800	OIME SL1500	1800	18,000
	95	dsl	2600	NATL 130	3000	18,000
	97	dsl	1400	NATL 80B	1400	15,000
	96	dsl	2600	NATL 130	3000	20,000

ALASKA (Cont'd)

Contractor	Rig No.	Type Power	Total HP All Main Mud Pumps	Drawworks Make and Model	Total HP Available to Drwwks	Rated Depth with 4½" Pipe
NORTH SLOPE (Cont'd)						
Rowan Drlg US	34	dsl-elec	2000	NATL 110EH Special	3000	17,000
	35	dsl-elec	2000	NATL 110EH Special	3000	17,000
	26	dsl	2000	NATL 110	1590	18,000
	41	dsl	3200	NATL 1320UE	3300	25,000
SWANSON RIVER						
Rowan Drlg US	29	dsl	1850	NATL 110	2400	20,000

ARIZONA

Contractor	Rig No.	Type Power	Total HP All Main Mud Pumps	Drawworks Make and Model	Total HP Available to Drwwks	Rated Depth with 4½" Pipe
COCONINO						
Stewart Bros Drlg	51	dsl	324	Failing 2500	324	3,000
	45	dsl	324	Failing 2500	324	3,000
MOJAVE						
Brinkerhoff-Signal	9	dsl	550	BRWSTR N45	600	7,500
PINAL						
Morrow Drlg	1	dsl	1360	CABOT/FRANKS 1287	350	4,000

ARKANSAS

Contractor	Rig No.	Type Power	Total HP All Main Mud Pumps	Drawworks Make and Model	Total HP Available to Drwwks	Rated Depth with 4½" Pipe
UNDESIGNATED						
Shuler Drlg	6	dsl	600	WILSON Giant	600	8,000
	8	dsl	450	Spencer 7000	400	7,000/4"
	5	dsl	325	BETH	350	5,000/3.5"
	7	dsl		Spencer	600	6,000/4"
COLOMBIA						
Nicor Drlg	58	dsl	1100	M-CSCO U15	700	12,000
COLUMBIA						
Butler-Johnson	2	dsl	1900	BRWSTR N85	1900	15,000
Justiss Oil	9	dsl	800	EMSCO GC500	1200	12,500
Nowotny & Conley Drlg	2	dsl	2000	OIME SL-1000	1200	15,000
	3	dsl	1800	BRWSTR N46	900	13,000
SH & J Drlg	1	dsl	807	Crdwll O	800	10,000
	2	gas-btne	885	BRWSTR N7	750	9,500
	3	dsl	807	UNIT 34	350	7,300
Transcontinental Drlg-Magnolia	54	dsl	800	NATL 50A	980	10,000
	7	dsl	1020	OILWELL 76	1020	12,500
Verna Corp	21	dsl	550	M-CSCO	600	10,000
CRAWFORD						
Dual Drlg	6	dsl	600	EMSCO GB350	560	7,500
FAULKNER						
Miller Drlg	104	gas	450	NATL 50	450	8,000
FORT SMITH						
Lanex Drlg	C-9	dsl-scr	1600	BDW 650	650	12,000
FRANKLIN						
Miller Drlg	5	gas	300	Spencer	145	5,500
	121	gas		Spencer 7000		8,000
HOT SPRINGS						
Henley Drlg	1	dsl	1725	OIME SL1000	1725	14,000
JOHNSON						
Miller Drlg	120	gas		Spencer 7000		8,000
LAFAYETTE						
Layton Oil	8	dsl	450	Cooper	300	6,500
Owen Drlg	7	dsl	1100	IDECO H35	504	7,000
Sawyer Drlg & Serv	5	dsl	1500	BRWSTR N75	1500	13,000
	1	dsl	700	BRWSTR N7	700	11,000
LOGAN						
C E C Drlg	1	dsl	1100	UNIT U15	800	10,000
FWA Drlg	6	dsl	900	WILSON 75	720	10,000
Henley Drlg	3	dsl	2475	BRWSTR N12A	2475	25,000
MILLER						
Transcontinental-Magnolia	4	gas	700	EMSCO GB500	700	9,500
NEVADA						
Sawyer Drlg & Serv	2	dsl	400	BRWSTR N4	400	8,500
POPE						
C E C Drlg	3	dsl	1200	GAR-DEN 500	800	12,000
FWA Drlg	31	dsl	1000	WILSON Mogul 42	750	7,500

ARKANSAS (Cont'd)

Contractor	Rig No.	Type Power	Total HP All Main Mud Pumps	Drawworks Make and Model	Total HP Available to Drwwks	Rated Depth with 4½" Pipe
POPE (Cont'd)						
Miller Drlg	7	gas	450	UNIT 15	450	8,500
	16	gas	300	Spencer 7000	380	7,500
	1	gas	450	NATL 50	450	7,000
Unit Drlg & Expl	6	dsl	600	UNIT U15	800	11,000
SCOTT						
Miller Drlg	117	dsl	1000	OIME SL7	1500	20,000
	14	dsl	600	NATL 50	600	10,000
SEBASTIAN						
Alexander Drlg	3	dsl	1000	EMSCO J1100	1200	15,000
Astro Drlg	22	dsl	920	BETH M58	920	12,000
	23	dsl	1050	CABOT/FRANKS 2550	1040	15,000
Basin Drlg	1	dsl	600	GAR-DEN 500M	820	10,000
	3	dsl	500	GAR-DEN 500M	820	10,000
Grace/Miller Drlg	123	dsl		BDW 800		15,000
Miller Drlg	15	dsl	600	Spencer	600	8,500
	118	dsl	300	M-CSCO U34	350	7,000
	12	dsl	350	Spencer 6000	300	6,000
	119	dsl		BDW 650		12,000
	3	gas	600	NATL 50	600	10,000
New Prospect Drlg	1	dsl	950	BRWSTR N46	950	12,000
Tierra Drlg	18	dsl-elec	800	BDW 650	650	12,000
UNION						
Hatcher & Son, H F	3	dsl	425	WILSON Mogul 42	350	5,000
Shuler Drlg	4	dsl	600	EMSCO GB350	600	8,000
	1	dsl	300	Spencer	325	5,000/3.5"

CALIFORNIA

Contractor	Rig No.	Type Power	Total HP All Main Mud Pumps	Drawworks Make and Model	Total HP Available to Drwwks	Rated Depth with 4½" Pipe
UNDESIGNATED						
Montgomery Drlg Canada	43	elec-scr	2000	NATL 110UE	2000	20,000
BAKERSFIELD						
Barnes Core Drlg	711-D	dsl	750	HOWARD-TURNER 5500	450	5,500
BUTTE						
Atlantic Oil	12	dsl	850	NATL 50A	680	9,000
COLUSA						
Hunnicutt Camp Drlg	4	dsl	1400	OILWELL 66	640	11,000
Loffland Bros	232	dsl	1000	M-CSCO U15	1000	12,000
CONTRA COSTA						
Hunnicutt Camp Drlg	5	dsl	960	IDECO 525	480	9,000
FRESNO						
Gary Drlg	D-4	dsl	475	EMSCO GB160T	450	4,500
Golden State Drlg	D-6	dsl	750	Custom Howard-Turner	450	5,500
IMPERIAL						
Coastal Drlg	7	dsl	2000	EMSCO J750	825	10,500
Montgomery Drlg	4	dsl	2000	OILWELL 96	1500	18,000
Trident Drlg	6	dsl	2000	NATL 110UE	1600	18,000
INYO						
California Prod Serv	M-70	dsl	446	IDECO H35CKD	424	4,000
KERN						
Atlantic Oil	8	dsl	1020	NATL T32	370	7,500
	10	dsl	1020	NATL T32	370	7,500
	4	dsl	900	NATL 55	900	10,000
Bawden Drlg, Peter (CA)	10	dsl-elec	2300	OILWELL 940E	1500	18,000
	11	dsl-elec	1600	EMSCO A800WE	1000	12,000
California Prod Serv	M-17	dsl	300	Crdwll K200C	308	4,000
Cardinal Drlg	29	dsl	800	EMSCO GA500	1200	10,000
	27	dsl	1200	EMSCO GC500	1200	12,500
Cleveland Drlg	1	dsl	1200	OILWELL 96	1200	18,000
	2	dsl	600	BRWSTR RR400	450	5,000
	3	dsl	1200	NATL 75CA	800	12,000
	4	dsl	2400	IDECO Super 711E	1600	18,000
Coastal Drlg	1	dsl	550	Crdwll KM250	250	5,500
	2	dsl	900	OILWELL 52T	550	7,500
Dahlquist Drlg	1	dsl	300	Tomson 3000	250	2,500
	5	dsl	300	Failing 2000	160	1,600
Edwards Well Serv	D30	dsl		IDECO	300	
Gary Drlg	D-11	dsl	600	EMSCO C50	600	8,000
	D-2	dsl	800	NATL T45	600	9,000
	D-9	dsl	628	CABOT/FRANKS	400	5,500
	D-10	dsl	628	Hooper	400	5,500
	D-12	dsl	382	EMSCO GB160T	300	4,500
	15	dsl	800	Gary	640	9,000
	D-30	dsl	300	IDECO 35		
	D-13	dsl	450	EMSCO GB16T	300	4,000
	14	dsl	800	Gary	640	9,000
	D-3	dsl	628	EMSCO G350	600	8,000
	D-7	dsl	381	Gary	200	2,000
	D-8	dsl	450	EMSCO GB160T	400	4,500
	D-5	dsl	382	Hopper GT34	300	2,500
	1	dsl	450	Hopper	400	5,000
	D-6	dsl	600	EMSCO GB160T	400	4,500
Golden State Drlg	D-8	dsl	750	Challenger 78	450	5,500
	D-10	dsl	750	Custom Howard-Turner	450	5,500

CALIFORNIA (Cont'd)

Contractor	Rig No.	Type Power	Total HP All Main Mud Pumps	Drawworks Make and Model	Total HP Available to Drwwks	Rated Depth with 4½" Pipe
KERN (Cont'd)						
Hylton Drlg	5	dsl	380	IDECO H30	300	5,000
	8	dsl	380	IDECO H30	300	5,000
	7	dsl	300	NATL T12	380	4,000
	9	dsl	400	IDECO H30	300	5,000
	1	dsl	400	NATL T12	300	4,000
	4	dsl	380	Howard-Turner MR10	150	3,000
K B Drlg & Prod	7			Cooper		
Kellogg & Sons, K L	41	elec	1000	NATL Con 75CA	700	11,000
Kenai Drlg West Coast	34	dsl	850	EMSCO GB350	800	9,000
	6	dsl	850	EMSCO J750	800	10,000
	29	dsl	900	WILSON Giant	1200	12,000
Loffland Bros	64	dsl-elec	1290	M-CSCO U36EA	1200	10,000
	328	dsl	2160	NATL 130	2400	22,000
	98	dsl-elec	2000	M-CSCO U40E	1600	13,000
Marlin Drlg (TX)	12	dsl	2000	NATL 110UE	1500	16,000
Marlin West	Marlin 12	dsl-el-scr	2000	NATL 110	1600	18,000
Melton Drlg	3	dsl	350	Wgnr-Mrhse	350	4,000
Monterey Drlg	D	scr	700	NATL 50A	700	10,000
Montgomery Drlg	14	dsl	1200	OILWELL 66	700	10,500
	15	dsl-elec	2000	NATL 75CB	1000	14,000
	1	dsl-elec	3200	NATL 1320UE	3645	25,000
Montgomery Mountain Drlg	45	dsl	2000	EMSCO GB800	750	12,000
NECK Drlg	1	gas	350	WILSON Super	350	4,000
	3					
	2	gas	450	Wgnr-Mrhse	450	6,000
Pyramid Oil	3	dsl	400	IDECO H30	300	3,000
Scandinavian Montgomery Drlg	9	dsl-elec	2200	NATL 1320UE	3000	22,000
	3	dsl	1200	NATL 75	700	12,000
	8	dsl	1200	NATL 75	700	12,000
	11	dsl	1500	EMSCO GB800	1500	12,000
Trident Drlg	4	dsl	1100	NATL 75CA	900	12,500
	1	dsl	1200	NATL 75CA	800	10,000
	3	dsl	1100	NATL 100	1650	15,000
KINGS						
Marlin Drlg (TX)	13	dsl	2000	NATL 110UE	1500	18,000
Marlin West	13	dsl-scr	2000	NATL 110UE	1600	18,000
LAKE						
Monterey Drlg	B	dsl-elec	1000	NATL 80B	2000	14,000
Montgomery Drlg	6	dsl	1400	EMSCO GB800	1200	13,000
	17	dsl-elec	2000	OILWELL 940E	2000	20,000
LOS ANGELES						
Atlantic Oil	3	dsl	680	IDECO H40	370	7,500
Bawden Drlg, Peter (CA)	18	dsl-elec	2300	NATL 110M	1500	16,000
	38	dsl-elec	1800	OILWELL 940E	1500	8,500
	22	dsl-elec	1400	EMSCO M58	800	10,000
Big Chief Drlg	18	dsl	500	HOOPER GXXTA	450	6,000
Brinkerhoff-Signal	90	dsl	4000	GAR-DEN 1500E	2000	25,000
California Prod Serv	M-73	dsl	370	IDECO H35CKD	424	4,000
	D-7	dsl	1000	Hooper MTA	654	6,500
	M-72	dsl	500	IDECO H35CKD	424	4,000
	D-3	dsl	300	IDECO H37D	461	4,500
Kellogg & Sons, K L	40	elec	1000	NATL 610	700	11,000
Kenai Drlg West Coast	24	dsl-elec	1500	WILSON Titan	1000	13,000
	30	dsl	800	IDECO H40	400	6,500
Monterey Drlg	C	elec	1000	NATL 100ME	1500	16,000
	F	scr	400	IDECO H30E	500	8,000
Pool Offshore	427			OIME 1500		16,000
RDC/Finley	6	dsl	636	IDECO H40	475	5,500
	17	dsl	1100	CABOT/FRANKS 1287	636	7,000
	16	dsl	636	IDECO H35	318	4,000
	11	dsl	636	IDECO H30	318	3,500
Thompson Drlg	2	dsl	900	EMSCO GA250T	450	6,500
MONTEREY						
Loffland Bros	185	gas	1600	M-CSCO U914C	1900	18,000
MONTERREY						
Brinkerhoff-Signal	8	gas-btne	1000	GAR-DEN 800	1000	14,000
ORANGE						
Atlantic Oil	2	dsl	1260	NATL 55	1260	11,000
Loffland Bros	92	dsl-elec	2160	M-CSCO U914CE	2200	18,000
	125	dsl-elec	2180	M-CSCO U914	2200	18,000
RDC/Finley	21	dsl	2100	NATL 55	1200	12,000
SACRAMENTO						
Atlantic Oil	6	dsl	810	NATL 80	1690	14,000
	14	dsl	1020	IDECO H		6,500
	7	dsl	1020	NATL T32	450	7,500
Owens Serv, Jack	8	dsl	900	600	430	10,000
SAN JOAQUIN						
Atlantic Oil	15	dsl	1020	NATL T32	340	7,500
Marlin Drlg (TX)	11	dsl	2000	NATL 110UE	1500	16,000
Marlin West	Marlin 11	dsl-el-scr	2000	NATL 110	1600	18,000
SAN LUIS OBISPO						
Kenai Drlg West Coast	5	dsl	850	NATL T32	400	7,000

CALIFORNIA (Cont'd)

Contractor	Rig No.	Type Power	Total HP All Main Mud Pumps	Drawworks Make and Model	Total HP Available to Drwwks	Rated Depth with 4½" Pipe
SANTA BARBARA						
Atlantic Oil	11	dsl	1350	NATL 80	1350	14,000
Bawden Drlg, Peter (CA)	50	dsl-mech	1500	NATL 55	700	12,000
Kenai Drlg West Coast	9	dsl	850	IDECO H40D	400	6,500
	8	dsl	825	Wgnr-Mrhse T5054	425	7,000
Loffland Bros	306	gas	1150	BRWSTR N95	1300	17,000
Montgomery Drlg	2	dsl-elec	2000	OILWELL 940E	3000	18,000
SANTA MARIA						
Trident Drlg	5	dsl-elec	3200	IDECO Super 711	1600	18,000
SOLANO						
Atlantic Oil	5	dsl	680	NATL 50A	680	9,000
Hunnicutt Camp Drlg	2	dsl	1520	OILWELL 660	880	12,500
	6	dsl-elec	4000	NATL 110	2000	16,000
	1	dsl	950	NATL T32	320	9,000
Monterey Drlg	A	dsl-elec	1000	IDECO 1040E	2000	18,000
Montgomery Drlg	7	dsl	1200	NATL 75	700	11,000
Owens Serv, Jack	2	dsl	200	IDECO H38	350	4,000
	5	dsl	300	IDECO H25	300	4,000
	6	dsl	300	IDECO H35	300	4,000
	7	dsl	700	Cooper 350	350	4,000
SONOMA						
Brinkerhoff-Signal	87	dsl	2000	NATL 80UE	2000	26,000
Loffland Bros	105	dsl-elec	2160	M-CSCO U914EC	2200	18,000
	25	dsl-elec	2160	M-CSCO U914CE	2200	18,000
	50	dsl-elec	1420	M-CSCO U712A	1600	17,000
	27	dsl-elec	2160	M-CSCO U20	2200	17,000
VENTURA						
Atlantic Oil	16	dsl	1650	NATL 130	2475	20,000
Bawden Drlg, Peter (CA)	24	dsl-elec	1550	NATL 80E	1000	14,000
	27	dsl-elec	1500	EMSCO A550E	1000	12,000
California Prod Serv	D-1	dsl	500	Hooper GXXTA	461	4,000
	D-4	dsl	500	Hooper MTA	461	4,500
Kenai Drlg West Coast	7	dsl	800	MAC 400	425	7,000
	4	dsl	800	IDECO H40D	400	6,500
Loffland Bros	212	gas	2000	M-CSCO U914A	1600	18,000
	217	gas	1600	M-CSCO U914C	1900	18,000
	16	dsl	1900	M-CSCO U914C	2000	18,000
RDC/Finley	20	dsl	2400	BRWSTR N95	1800	18,000
	22	dsl	1900	UNIT U36A	950	10,000
YOLO						
Bawden Drlg, Peter (CA)	23	dsl-elec	1700	EMSCO A800	1000	14,000
Hunnicutt Camp Drlg	3	dsl	1400	NATL CA50	640	10,500
Owens Serv, Jack	4	dsl	300	IDECO H35	150	4,000

COLORADO

Contractor	Rig No.	Type Power	Total HP All Main Mud Pumps	Drawworks Make and Model	Total HP Available to Drwwks	Rated Depth with 4½" Pipe
ADAMS						
Exeter Drlg Northern	40	dsl	500	M-CSCO U15	750	9,500
	56	dsl		GAR-DEN 1100	1650	20,000
Western Well Drlg	1	dsl	350	Midway 2000	350	2,500
ARAPAHOE						
Gibson Well Serv, J W	96	dsl	700	Superior	700	10,000
BOULDER						
Exeter Drlg Northern	12	dsl	500	NATL T45	750	9,500
CHEYENNE						
Murfin Drlg	14	dsl	400	NATL T45	700	8,000
DOLORES						
Coleman Drlg	1	dsl	900	IDECO H44	636	8,000
GARFIELD						
Alco Drlg	3			BRWSTR N4		6,000
	5	dsl	326	NATL T32	326	7,500
Cardinal Drlg	2	dsl	864	EMSCO GA500	760	10,000
Manning, R L	11	dsl	720	NATL 370	720	8,500
Shelby Drlg	10	dsl		Superior 400ESCR		8,500
HUERFANO						
Loffland Bros	26	dsl-elec	2000	M-CSCO U36	1600	11,000
	29	dsl-elec	1400	M-CSCO U36A	1600	11,000
JACKSON						
Nicor Drlg	38	dsl	750	WILSON 75	640	9,000
Republic Drlg & Serv	9	dsl-elec	1000	IDECO 725E	1000	11,000
Shelby Drlg	11	dsl		IDECO 35ESCR		10,000
KIOWA						
Murfin Drlg	25	dsl	600	NATL 370	600	7,500

COLORADO (Cont'd)

Contractor	Rig No.	Type Power	Total HP All Main Mud Pumps	Drawworks Make and Model	Total HP Available to Drwwks	Rated Depth with 4½" Pipe
KIT CARSON						
Exeter Drlg Northern	2	dsl	375	EMSCO GA250	480	7,500
LA PLATA						
Four Corners Drlg	4	dsl	1500	Crdwll KB500	700	8,000
LARIMER						
Exeter Drlg Northern	6	dsl	330	NATL T20	300	6,000
	22	dsl	500	M-CSCO U15	750	9,500
LOGAN						
Excell Drlg	3	dsl	400	Failing Stratmaster 100	400	5,500
	4	dsl	230	Ewbanks Model M75	230	2,000
MESA						
Coleman Drlg	4	dsl	1300	BRWSTR MOON46	930	10,000
Nicor Drlg	37	dsl	850	Failing LC90	340	7,000
	44	dsl-elec	1500	GAR-DEN 500E	650	11,000
	39	dsl	750	NATL D300	300	5,500
	26	dsl	1100	NATL 50A	425	11,500
Tierra Drlg	16	dsl	650	BRWSTR 4610	750	7,500
Veco Drlg	8	dsl	800	BRWSTR 45	750	10,000
	2	dsl	425	Mayhew 5000	500	7,000
	6	dsl	1400	OIME 750	750	11,000
	5	dsl	1400	OIME 750	750	11,000
	7	dsl	1550	OIME 1000	1000	16,000
MOFFAT						
Alco Drlg	56	dsl-elec	1800	NATL 80UE	1800	15,000
Brinkerhoff-Signal	6	dsl	1500	GAR-DEN 1100	1500	18,000
Parker Drlg	177	dsl	1400	OIME SL1500	1400	16,500
Veco Drlg	9	dsl	1200	IDECO 725	750	11,000
MONTROSE						
Loffland Bros	5	dsl	1220	IDECO H1000	868	12,000
MORGAN						
Allison Bros Drlg	2	dsl	360	CRDWLL KB500	380	7,500
	7	dsl	475	IDECO BIR800	950	10,000
Allison Drlg	3	dsl	360	CRDWLL KB500	380	7,500
	15	dsl	720	BRWSTR N7	720	10,000
	25	gas	435	GAR-DEN 500	435	10,000
Gibson Well Serv, J W	93	dsl	450	CABOT/FRANKS M1287	480	6,000
PROWERS						
Murfin Drlg	12	dsl	400	BETH C50	600	7,500
RIO BLANCO						
Cardinal Drlg	4	dsl	560	EMSCO GB350T	780	8,500
Kenai Drlg Rocky Mountain	3	dsl	600	OILWELL 52T	700	9,500
Manning, R L	19	dsl	925	BETH M58	980	10,000
	24	dsl	860	BRWSTR N75	980	11,000
Nicor Drlg	57	dsl	925	NATL T45	550	10,600
Shelby Drlg	5	dsl	360	Cooper LTO550	450	7,500
Twin Arrow	309	dsl		BRWSTR	575	6,000
Veco Drlg	1	dsl	400	Failing 90	400	5,000
Viersen & Cochran Drlg Co	13	dsl	1850	NATL 80B	1500	18,000
ROUTT						
Nicor Drlg	43	dsl-elec	1500	GAR-DEN 500E	650	11,000
SEDGWICK						
Gibson Well Serv, J W	75	dsl	450	Crdwll K8500	450	8,000
SUMMIT						
Transcontinental Drlg-Denver	41	dsl	2450	GAR-DEN 1100	2925	18,000
WASHINGTON						
Gear Drlg	1	dsl	350	NATL 50A	550	7,500
Toltek Drlg	4	dsl	440	UNIT U34	440	7,500
Western Well Drlg	2	dsl	350	Failing H2000	350	3,500
WELD						
Allison Bros Drlg	1	dsl	320	IDECO BIR800	920	10,000
Antelope Drlg	1					
Exeter Drlg Northern	1	dsl	500	NATL 50A	750	9,500
	25	dsl	375	M-CSCO U15	500	8,500
	4	dsl	375	NATL T32	460	7,800
	33	dsl	500	M-CSCO U15	750	8,500
	23	dsl	500	M-CSCO U15	750	8,700
	14	dsl	375	BETH C50	600	7,800
Grace-Bomac Drlg	93	dsl-elec	3200	NATL 1320UE	2000	25,000
Toltek Drlg	3	dsl	680	BRWSTR N4A	440	8,500
	2	dsl	680	NATL 50A	875	10,500
	1	dsl	440	BRWSTR N4	440	8,500
Zenith Drlg	8	dsl	600	EMSCO GB350	600	8,500
YUMA						
Excell Drlg	2	dsl	375	671 GMC	210	3,300

FLORIDA

Contractor	Rig No.	Type Power	Total HP All Main Mud Pumps	Drawworks Make and Model	Total HP Available to Drwwks	Rated Depth with 4½" Pipe
COLLIER						
Penrod Drlg	108	dsl	1000	NATL 80B	1760	15,000
SEE Land Drlg	14	dsl	1500	RMI	1000	15,000
	9	dsl	1500	NATL 100	1200	14,000
ESCAMBIA						
Tesoro Drlg	2	dsl	2600	NATL 1320M	2742	20,000
SANTA ROSA						
Delta Drlg	93	dsl-scr	2000	EMSCO D3 Type II	2592	16,000
Murco Drlg	18	dsl	2800	M-CSCO U1220	2400	25,000

IDAHO

Contractor	Rig No.	Type Power	Total HP All Main Mud Pumps	Drawworks Make and Model	Total HP Available to Drwwks	Rated Depth with 4½" Pipe
CARIBOU						
Loffland Bros	57	dsl-elec	1600	NATL 80B	2000	16,000

ILLINOIS

Contractor	Rig No.	Type Power	Total HP All Main Mud Pumps	Drawworks Make and Model	Total HP Available to Drwwks	Rated Depth with 4½" Pipe
UNDESIGNATED						
Gallegher Drlg	4	dsl	500	BETH S46E	476	6,000
P E P Drlg	7	dsl	550	EMSCO WS1	470	7,500
	2	dsl	500	IDECO H35S	350	6,500
	4	dsl	550	GAR-DEN 500	500	7,000
	5	dsl	550	GAR-DEN 500M	500	7,000
	1	dsl	550	BRWSTR N45	450	7,500
	6	dsl	550	IDECO H35S	350	6,500
CLAY						
Precision Expl	4	dsl	400	NATL T20	400	5,500
Smith Drlg	11	dsl	450	NATL T20	480	6,000
Wilson Inc, Les	15	dsl	500	IDECO H35	400	5,000
CRAWFORD						
Nicor Drlg	54	dsl-mech	400	IDECO H35CKD	500	4,300
CUMBERLAND						
Mitchell Drlg, Geo N	1	dsl	400	BETH SN45	400	6,000
EDWARDS						
Davis Drlg, D L	1	dsl	300	WILSON Mogul 38	300	3,500
Mitchell Drlg, Geo N	6	dsl	400	WILSON Super 38	400	6,000
Ram Drlg	2	dsl	1800	NATL T12	1800	5,000
Smith Drlg	9	dsl	320	NATL T12	320	4,000
FAYETTE						
Smith Drlg	7	dsl	450	GAR-DEN 2500	350	3,500
FRANKLIN						
Mitchell Drlg, Geo N	5	dsl	400	BRWSTR N4	400	6,000
JASPER						
Precision Expl	5	dsl	400	NATL T12	385	4,500
LINCOLN						
Venture Drlg	2	dsl	500	CABOT/FRANKS 750	700	6,500
MARION						
Mitchell Drlg, Geo N	4	dsl	400	BRWSTR N4	400	6,000
Precision Expl	2	dsl	400	NATL T20	400	5,500
RICHLAND						
Precision Expl	3	dsl	400	NATL T16	400	5,500
SALINE						
Big Seven Drlg	7	dsl	450	EMSCO GB250	400	6,000
WABASH						
Beard Drlg (IL)	1	dsl		NATL T12	350	4,500
WASHINGTON						
Oelze, Elmer Jr	1	dsl	475	Lee 650	475	8,500
	4	gas		Crdwll HL	140	4,000
	2	dsl	475	Wlkr-Nr 25040	380	6,000
	3	dsl		Wlkr-Nr S34A	180	5,000
WAYNE						
Barr Drlg	1	dsl	378	NATL T12	286	5,000
Mitchell Drlg, Geo N	7	dsl	400	IDECO H35	400	6,500
Precision Expl	1	dsl	400	NATL T20	400	5,500
Smith Drlg	3	dsl	375	NATL T12	375	5,000
WHITE						
Harris Drlg	4	dsl	500	NATL 50	380	6,000
	1	dsl	500	NATL T12	380	4,000
Snyder Drlg Well Serv	1	dsl	400	BRWSTR 55	400	6,500
	2	dsl	400	BETH 546	400	6,000
Wilson Inc, Les	12	dsl	500	IDECO H35	400	5,000
WILLIAMSON						
Gallagher Drlg	5	dsl	300	NATL T12	310	3,500

INDIANA

Contractor	Rig No.	Type Power	Total HP All Main Mud Pumps	Drawworks Make and Model	Total HP Available to Drwwks	Rated Depth with 4½" Pipe
DAVIESS						
Gwaltney Drlg	1	dsl	300	NATL T12	225	3,000
FULTON						
Nicor Drlg	22	dsl	1200	IDECO H35	720	7,000
GIBSON						
Lohmann Drlg	21	dsl		NATL T12		4,000
Ram Drlg	3	dsl	360	NATL T12	360	4,000
	1	dsl	1800	IDECO HD35	1800	6,000
Royco Drlg	2	dsl	300	GAR-DEN 3000	200	5,000
Smith Drlg	2	dsl	350	NATL T8	238	2,500
POSEY						
Gallagher Drlg	7	dsl	350	NATL T20	475	5,000
Kendall Drlg	2	dsl	450	BRWSTR N4	350	5,500
	3	dsl	450	BRWSTR N4	300	5,500
Lohmann Drlg	6	dsl	600	NATL 50	600	6,500
Mitchell Drlg, Geo N	9	dsl	600	GAR-DEN 500M	600	9,000
Royco Drlg	1	dsl	300	Crdwll	335	5,500
VANDERBURGH						
J-V Drlg	8	dsl	145	Speedstar SS15S	145	1,600/3.5"
	6	dsl	145	Speedstar SS15S	145	1,600/3.5"
	9	gas	85	FRANKS F	85	600/2.88"

IOWA

Contractor	Rig No.	Type Power	Total HP All Main Mud Pumps	Drawworks Make and Model	Total HP Available to Drwwks	Rated Depth with 4½" Pipe
DALLAS						
Allen Drlg	4	dsl	350	NATL T20	425	4,500

KANSAS

Contractor	Rig No.	Type Power	Total HP All Main Mud Pumps	Drawworks Make and Model	Total HP Available to Drwwks	Rated Depth with 4½" Pipe
UNDESIGNATED						
Heartland Drlg	1	dsl	500	IDECO H35S	650	6,500
Wakefield, Earl F	7	dsl	640	EMSCO GB160T	640	5,000
ALLEN						
Layton Oil	2	dsl	180	Failing 1500	100	1,500
ANDERSON						
Carter Land & Cattle	1	dsl	250	GAR-DEN 1000	350	1,000
BARBER						
Graves Drlg	1	dsl	300	BRWSTR N4	400	6,000
Hughes Drlg	7	dsl	550	IDECO H37	475	8,000
Wheatstate Oilfield	2	dsl	450	Mini-Max 15	450	6,500
BARTON						
Abercrombie Drlg	11	dsl	600	EMSCO 350	700	7,500
	12	dsl	365	BETH Freeze	300	5,500
Allen Drlg	1	dsl	400	NATL T32	425	8,000
	3	dsl	525	IDECO H30	425	5,000
Bergman Drlg	1	dsl	350	EMSCO	350	5,500
Damac Drlg	7	dsl	385	BRWSTR N4	385	6,000
Duke Drlg	1	dsl	375	UNIT	375	5,000
Peters Drlg	8	dsl	250	Crdwll DB200	250	6,000
Quanza Drlg	1	dsl	300	NATL 300B	300	5,500
	2	dsl	250	BRWSTR N4	450	4,500
Red Tiger Drlg	4	dsl	700	EMSCO Gas 250	700	5,500
	5	dsl	700	UNIT U15	700	6,000
Rockhold Engr	7	gas		Wlkr-Nr	200	
Slawson Drlg	2	dsl	360	IDECO H525	480	7,500
Sunflower Drlg	S-9	dsl	500	BRWSTR N42	600	7,500
	S-10	dsl	500	BRWSTR N42	600	7,500
White & Ellis Drlg	8	dsl	410	EMSCO 350	750	7,500
	10	dsl	410	BETH S45E	410	5,000
	9	dsl	410	BRWSTR N46	750	10,500
BUTLER						
Brandt Drlg	3	dsl	350	Wlkr-Nr R4	335	3,500
Edco Drlg	2	dsl	375	Sullivan 300	375	3,000
Kansas Drlg & Well Serv	4	dsl	750	KREMCO K600	500	7,000
McAllister Drlg	1	dsl	280	IDECO H30	312	5,500
Range Drlg	1	dsl	360	CABOT/FRANKS SAL-4500	440	3,500
White & Ellis Drlg	7	dsl	300	UNIT U34	475	4,000
	3	dsl	345	NATL T12	345	4,500
	4	dsl	300	EMSCO GA250	300	5,000
	5	dsl	300	EMSCO GA150	475	4,000
CLARK						
Damac Drlg	8	dsl	310	IDECO H35S	450	7,500
Eagle Drlg	1	dsl	600	NATL 370	650	7,000
Gabbert-Jones	3	dsl	410	EMSCO 350	475	8,000
Murfin Drlg	22	dsl	600	NATL 370	600	7,500
Pickrell Drlg	1	dsl	450	M-CSCO U15	450	6,500
Rine Drlg	8	dsl	700	BRWSTR N55	700	8,500
Sage Drlg	5	dsl	400	NATL T32	400	6,700
TMBR Drlg	31	dsl	600	UNIT U15	500	7,000
COWLEY						
Range Drlg	3	dsl	350	UNIT 10A	350	5,500
	2	dsl	350	WILSON Giant	350	5,500

KANSAS (Cont'd)

Contractor	Rig No.	Type Power	Total HP All Main Mud Pumps	Drawworks Make and Model	Total HP Available to Drwwks	Rated Depth with 4½" Pipe
DECATUR						
Murfin Drlg	7	dsl	525	NATL T32	400	6,000
EDWARDS						
Sterling Drlg (KS)	2	dsl	350	UNIT RV34B	285	4,800
ELK						
Edco Drlg	1	dsl	375	Sullivan 300A	318	3,000
ELLIS						
Abercrombie Drlg	1	dsl	365	M-CSCO U34	365	5,000
Big Springs Drlg	3	dsl	450	BRWSTR N4	450	5,000
Buffalo Drlg Inc	1	dsl	500	BRWSTR N4	400	6,000
Edsco Drlg	1	dsl	450	Wlkr-Nr 25040	425	6,000
Gabbert-Jones	8	dsl	450	NATL T32	450	6,000
Galloway Drlg	1	dsl	300	NATL T32	300	5,000
Jay-Lan Corp	3	dsl	3406	WILSON Model 42	825	6,000
Murfin Drlg	8	dsl	400	NATL T20	400	5,000
Peters Drlg	4	dsl	250	Crdwll RL	250	6,000
Red Tiger Drlg	2	dsl	700	EMSCO GA-250	700	5,500
Slawson Drlg	1	dsl	360	IDECO H35	380	5,500
ELLSWORTH						
Allen Drlg	2	dsl	350	IDECO H25	425	4,500
Rockhold Engr	3	gas		Crdwll RL	150	
FINNEY						
Cheyenne Drlg	1	dsl	450	OILWELL 52T	525	6,500
Linc Drlg	2	dsl	350	Wlkr-Nr Apache 250	368	6,000
FORD						
Slawson Drlg	6	dsl	360	IDECO H525	480	7,500
GOVE						
Allen Drlg	5	dsl	525	NATL 370	600	7,000
Red Tiger Drlg	9	dsl	700	UNIT U10	700	6,000
GRAHAM						
Farmer, John O	4	dsl	400	IDECO H30	400	6,000
Linc Drlg	1	dsl	350	Wlkr-Nr Apache 250	368	6,000
Murfin Drlg	21	dsl	375	IDECO H35	475	6,500
GRANT						
Rains & Williamson Oil	2	dsl	450	OILWELL 52-T	450	6,700
Service Drlg (OK)	10	dsl	300	UNIT RU34	400	5,500
GRAY						
Big Springs Drlg	2	dsl	360	NATL T32	360	5,500
GREENWOOD						
Edco Drlg	3	dsl	125	Crdwll J101	235	750
	4	dsl	125"	Davey	235	750
Sterling Drlg (KS)	8	dsl	350	GAR-DEN 2000	350	2,800
HARPER						
FWA Drlg	32	dsl	600	WILSON Mogul 42	375	6,000
Gabbert-Jones	6	dsl	450	NATL T32	310	6,000
H30 Drlg	3	dsl	280	IDECO H40	312	8,000
Slawson Drlg	4	dsl	6500	IDECO H35	360	7,500
Sweetman Drlg	1	dsl	750	NATL 370	750	9,000
HASKELL						
Cheyenne Drlg	4	dsl	600	NATL 370	600	8,500
HODGEMAN						
Aldebaran Drlg	2	dsl	525	NATL T32	500	7,200
Beredco	3	dsl	500	M-CSCO U15	600	7,500
KINGMAN						
Brandt Drlg	2	dsl	350	NATL 370	600	7,500
Edco Drlg	5	dsl	475	Crdwll KB200	375	4,500
KANDRILCO Inc	2	dsl	375	MAC 400	475	5,500
Pickrell Drlg	10	dsl	370	M-CSCO U15	370	5,500
KIOWA						
Abercrombie Drlg	6	dsl	365	IDECO H35	365	6,000
DNB Drlg	3	dsl	450	NATL T20	350	5,000
Gabbert-Jones	9	dsl	310	NATL T32	450	6,000
Lauck Oil, D R	1	dsl	350	M-CSCO U15	400	6,000
Leben Drlg	11	dsl	500	GAR-DEN 3000	500	7,000
Red Tiger Drlg	6	dsl	700	IDECO H35	700	6,000
LANE						
KANDRILCO Inc	1	dsl	375	EMSCO GA250T	475	5,500
LOGAN						
Abercrombie Drlg	5	dsl	750	IDECO 725	600	10,000
	7	dsl	365	M-CSCO U34	365	5,000
Slawson Drlg	3	dsl	480	IDECO H35	480	7,000
McPHERSON						
Blackstone Drlg	4	dsl		BDW	450T	4,000
	3	dsl	300	450T BDW	300	5,000
	2	dsl	300	NATL T20	300	4,000
Edco Drlg	6	dsl	375	Crdwll KB150	318	3,500
Red Tiger Drlg	3	dsl	700	IDECO H35	700	5,500
MARION						
Berentz Drlg	3	dsl	440	NATL T12	500	3,800
Kansas Drlg & Well Serv	5	dsl	750	Crdwll KB200C	400	6,000
	2	dsl	265	Cooper 4242	235	2,000
	1	dsl	365	CABOT/FRANKS 1058	300	4,000
MEADE						
Prairie Drlg	8	dsl	1500	WILSON Atlas	1500	14,000
	9	dsl	500	EMSCO G350	1000	9,000
	3	dsl	1000	EMSCO GB500	1000	10,500
Rains & Williamson Oil	5	dsl	400	IDECO H40	525	7,000
Silverado Drlg	8	dsl	360	Crdwll J450	525	6,700
MIAMI						
L & R Drlg	6	dsl	318	CABOT/FRANKS 50	318	1,500/3.5"
MORTON						
Service Drlg (TX)	2	dsl	430	M-CSCO U34	450	6,000
Sunflower Drlg	S-7	dsl	500	BRWSTR N42	600	7,500
NEMAHA						
Brandt Drlg	1	dsl	350	BETH S50	450	5,000
Hamm Drlg	1	dsl	400	Wlkr-Nr Apache	425	6,000
NEOSHO						
Carter Land & Cattle	2	dsl	250	GAR-DEN 1000	350	1,000
NESS						
Lauck Oil, D R	2	dsl	350	BRWSTR N45	400	6,000
Leben Drlg	7	dsl	500	GAR-DEN 3000	500	7,000
Slawson Drlg	5	dsl	360	IDECO H525	480	7,500
Strata Drlg	1	dsl	500	M-CSCO U15	800	7,500
OSAGE						
Cardinal Drlg	34	dsl	400	EMSCO GB160	400	4,500
PAWNEE						
L D Drlg	1	dsl	410	BETH S45A	300	4,500
Rains & Williamson Oil	4	dsl	400	BRWSTR N4	450	5,500
PRATT						
Aldebaran Drlg	3	dsl	525	IDECO	600	7,200
Beredco	2	dsl	525	NATL 370	575	7,000
Big Springs Drlg	1	dsl	360	BETH S4513	360	5,000
Damac Drlg	1	dsl	310	WILSON Giant	310	6,000
H30 Drlg	5	dsl	510	IDECO H35	510	6,500
Murfin Drlg	19	dsl	525	WILSON Super Mogul 42	525	6,500
Wheatstate Oilfield	1	dsl	340	IDECO H35	525	6,000
RAWLINS						
Abercrombie Drlg	4	dsl	365	IDECO H35	365	8,500
Murfin Drlg	24	dsl	525	IDECO H35	475	6,500
RENO						
H30 Drlg	7	dsl	280	M-CSCO Mac400	312	8,000
Red Tiger Drlg	1	dsl	700	UNIT U15	700	6,000
RICE						
Sterling Drlg (KS)	5	dsl	350	EMSCO GB350	600	7,000
	1	dsl	350	M-CSCO U34	285	4,600
White & Ellis Drlg	2	dsl	425	EMSCO GA250	475	4,500
ROOKS						
J W Drlg	1	dsl	320	M-CSCO U15	320	6,000
Murfin Drlg	15	dsl	400	IDECO H35	475	6,500
Rains & Williamson Oil	11	dsl	300	BRWSTR	500	4,500
Red Tiger Drlg	8	dsl	700	EMSCO GA250T	700	5,500
RUSH						
Dunne-Gardner Petr	1	dsl	350	EMSCO 250	450	5,000
H30 Drlg	11	dsl	280	IDECO H30	312	5,500
RUSSELL						
Rains & Williamson Oil	9	dsl	300	BETH	300	4,500
Shields Drlg	2	dsl	300	BETH C50	300	5,500
SALINE						
Landmark Energy Corp	2	dsl	425	IDECO H30	425	5,000
	1	dsl	425	WILSON Mogul 42	425	6,500
Trans-Pac Drlg	1	dsl	500	IDECO H35SC	650	6,500
SCOTT						
Gabbert-Jones	11	dsl	310	NATL 370	450	6,000
Sunflower Drlg	S-6	dsl	500	BRWSTR N42	600	7,500
SEWARD						
Bohannan Drlg, J B	1	dsl	950	IDECO 725	750	10,000
Damac Drlg	6	dsl	550	CABOT/FRANKS BIR550	450	6,500

KANSAS (Cont'd)

Contractor	Rig No.	Type Power	Total HP All Main Mud Pumps	Drawworks Make and Model	Total HP Avail-able to Drwwks	Rated Depth with 4½" Pipe
SEWARD (Cont'd)						
Gabbert-Jones	12	dsl	450	BRWSTR N42	525	8,000
N R G Drlg	1	dsl	560	WILSON Mogul 42	560	7,000
Sage Drlg	1	dsl	400	NATL T32	400	6,500
	7	dsl	400	BDW 450	400	9,000
	2	dsl	400	OILWELL T52	400	6,700
Tierra Drlg	17	dsl-elec	800	BDW 650	650	12,000
Zenith Drlg	4	dsl	1100	UNIT U15	1100	12,000
	7	dsl	550	BRWSTR N4	500	7,000
	6	dsl	600	EMSCO GB350	600	8,500
	2	dsl	600	EMSCO GB350	600	8,500
SHERIDAN						
Dunne-Gardner Petr	2	dsl	400	IDECO H35	450	7,000
Rains & Williamson Oil	1	dsl	525	BETH S45-B	450	5,500
STAFFORD						
Duke Drlg	2	dsl	250	NATL	250	5,000
Husky Drlg	2	dsl	350	IDECO H35	650	8,000
H30 Drlg	2	dsl	280	MAC 400	312	8,000
Sterling Drlg (KS)	4	dsl	450	M-CSCO U15	285	5,000
Wheatstate Oilfield	3	dsl	340	EMSCO 250	425	5,000
STANTON						
Service Drlg (OK)	2	dsl	300	UNIT RU34	450	5,500
STEVENS						
Wakefield, Earl F	1	dsl	440	M-CSCO U34	440	5,000
SUMNER						
R R A Inc	1	dsl	335	Cooper 350	325	6,500
Rains & Williamson Oil	3	dsl	525	Crdwll J350	525	6,700
Sunflower Drlg	S-4	dsl	500	BRWSTR N42	600	7,500
THOMAS						
Abercrombie Drlg	8	dsl	365	BETH S50	365	5,500
Murfin Drlg	2	dsl	400	NATL T32	400	6,000
TREGO						
Abercrombie Drlg	10	dsl	365	CABOT/FRANKS Tri Mtd	220	4,500
	9	dsl	365	BETH Breeze	365	5,500
Aldebaran Drlg	1	dsl	525	BRWSTR N42	600	7,200
Buffalo Drlg Co	7	dsl	360	BRWSTR N4	460	5,500
DNB Drlg	2	dsl	500	NATL T32	525	6,500
Murfin Drlg	16	dsl	400	EMSCO S45E BETH	400	8,000
Red Tiger Drlg	7	dsl	700	EMSCO GA250T	700	5,500
Sunflower Drlg	S-5	dsl	500	BRWSTR N42	600	7,500
WALLACE						
Murfin Drlg	23	dsl	375	IDECO 35	475	6,500

KENTUCKY

Contractor	Rig No.	Type Power	Total HP All Main Mud Pumps	Drawworks Make and Model	Total HP Avail-able to Drwwks	Rated Depth with 4½" Pipe
DAVIESS						
Crescent Drlg	7	dsl	1200	BETH Toro	1200	12,000
HENDERSON						
Kendall Drlg	1	dsl	450	NATL T12	300	4,000
Lightning Drlg & Constr	1	dsl	325	IDECO 20	400	3,800
	2	dsl	300	Dresser T70W	300	3,200
Mitchell Drlg, Geo N	8	dsl	400	Mac 300	300	4,200
HOPKINS						
Crescent Drlg	4	dsl	400	BETH S45	400	4,000
Weal Drlg	2	dsl	335	Crdwll S	335	4,000
	1	dsl	325	NATL T12	360	4,000
MUHLENBERG						
Crescent Drlg	8	dsl	400	BETH S45	400	5,000
PIKE						
Ray Resources	4	dsl	450	IDECO BIR5525	600	6,000
TODD						
W W Corp	1	dsl	450	GAR-DEN 3000	450	5,000
UNION						
Big Seven Drlg	11	dsl	360	EMSCO GB160	335	4,000
WHITLEY						
Miller Contract Drlg	16	dsl	525	Ingersoll	525	3,000

LOUISIANA

Contractor	Rig No.	Type Power	Total HP All Main Mud Pumps	Drawworks Make and Model	Total HP Avail-able to Drwwks	Rated Depth with 4½" Pipe
UNDESIGNATED						
Goldrus Drlg	2	dsl-elec	2000	OILWELL E2000	2000	25,000
	6	dsl-elec	3400	OILWELL E2000	1700	20,000
	11	dsl	1500	BRWSTR N12A	2000	16,000
	20	dsl	1950	CABOT/FRANKS 1200	1054	15,000
	4	dsl	1200	BRWSTR N75	1040	14,000
	3	dsl-elec	1700	OILWELL E2000	3400	20,000

LOUISIANA (Cont'd)

Contractor	Rig No.	Type Power	Total HP All Main Mud Pumps	Drawworks Make and Model	Total HP Avail-able to Drwwks	Rated Depth with 4½" Pipe
UNDESIGNATED (Cont'd)						
Harris Well Serv	26	dsl	632	IDECO H44	750	10,000
	17	dsl	316	IDECO H35	316	7,500
	27	dsl	316	IDECO H35	316	7,500
	31	dsl	316	Cooper LTD350	316	7,500
	32	dsl	316	IDECO H35	316	7,500
	28	dsl	316	IDECO H35	316	7,500
	24	dsl	316	IDECO H35	316	7,500
	25	dsl	632	IDECO H44	632	10,000
	23	dsl	316	IDECO H37	480	8,000
	33	dsl	900	IDECO H44	900	10,000
	29	dsl	316	IDECO H35	316	7,500
	22	dsl	316	IDECO H35	316	7,500
	21	dsl	316	IDECO H35	316	7,500
	19	dsl	316	IDECO H35	316	7,500
	30	dsl	2000	IDECO 1200	1400	13,500
	18	dsl	316	IDECO H35	316	7,500
Nicklos Drlg	28	dsl-elec	3000	EMSCO Electrohoist III	3600	25,000
	23	dsl	1850	NATL 110	1755	18,000
	25	dsl	2000	EMSCO A1500	2119	20,000
Power Rig Drlg	11	dsl	2700	EMSCO CI	2000	25,000
	21	dsl	3500	EMSCO C2	2000	25,000
	10	dsl	2600	EMSCO A1500	1450	30,000
	17	dsl-elec	2000	IDECO E1700	2400	16,000
	18	dsl	3200	EMSCO C2	2000	25,000
	20	dsl	1850	IDECO E900	900	13,000
	12	dsl	3200	EMSCO A1500M	2200	30,000
	22	dsl-elec	2700	IDECO E1700	1700	18,000
	15	dsl	2350	EMSCO C1 Type III	1950	16,000
	19	dsl	3000	EMSCO C3	3300	30,000
	9	dsl	1850	EMSCO D3	1450	14,000
	23	dsl-elec	2000	EMSCO C2	2000	30,000
	24	dsl-elec	3300	EMSCO C3	3000	40,000
Rebel Drlg	2	dsl	350	BETH S455	350	8,000
Santa Fe Drlg	120	dsl-elec	3400	EMSCO C311E	3000	25,000
ACADIA						
Comet Drlg	8	dsl	1700	CABOT 1200	1200	13,500
Delta Drlg	31	dsl	2300	EMSCO C1 Type III	2592	20,000
Glasscock Drlg	69	dsl	2700	NATL 1320	2700	20,000
	61	dsl	1400	NATL 80B	1250	13,500
Glendel Drlg	5	dsl-elec	2000	GAR-DEN 1100E	2000	18,000
Goldrus Drlg	10	dsl	1250	BETH MA810	1176	13,000
	9	dsl	1750	BETH M810	1560	16,000
Great Southern Oil & Gas	5	dsl	500	WILSON	318	7,000
Grey Wolf Drlg	1	dsl	2000	EMSCO C1	2000	16,000
Nicor Drlg	80	dsl-mech	975	WILSON Mogul 42	450	9,000
	74	dsl-mech	2900	NATL 1320M	2000	25,000
Penrod Drlg	11	dsl	2600	NATL 1320M	3425	25,000
Resource Drlg	RD-21	dsl	2330	NATL 110	2740	18,000
Richards Drlg	10	dsl-elec	3400	OILWELL E3000	3000	30,000
ALLEN						
Chapman Drlg	141	dsl-mech	2000	OIME SL7	1000	15,000
Explorer Drlg	12	dsl	1300	IDECO 700	2730	9,500
Justiss Oil	22	dsl	1800	NATL 80B	1420	14,000
Woolf & Magee	6	dsl	850	IDECO H35	500	10,000
ASCENSION						
Glasscock Drlg	70	dsl	1600	NATL 80B	1600	14,000
Loffland Bros	167	dsl	2160	M-CSCO U914C	2400	20,000
Quarles Drlg (LA)	19	dsl	1300	OILWELL 96	1500	15,000
ASSUMPTION						
Glasscock Drlg	65	dsl	2200	NATL 110	1700	16,000
Merit Drlg	1	dsl-scr	2800	OILWELL 2000E	2000	25,000
Nicor Drlg	73	dsl-mech	1000	CABOT/FRANKS 2550TRD	1200	15,000
Wilson Bros Drlg	5	dsl	2600	NATL 110M	2700	20,000
AVOYELLES						
Bailey Drlg, Pernie	4	dsl	2900	NATL 1320M	3000	20,000
Comet Drlg	10	dsl	1700	CABOT 900	900	10,500
Culver Drlg	10	dsl	1500	NATL 110	1500	16,000
BATON ROUGE						
Helmerich & Payne intl Drlg	73	dsl-elec	2835	OILWELL 3000M	3400	30,000
BEAUREGARD						
Cliffs Drlg	32	dsl	2600	NATL 110	2475	20,000
Explorer Drlg	14	dsl	1300	CABOT/FRANKS 2650	2000	13,500
Glasscock Drlg	63	dsl	2200	NATL 110	1700	16,000
Grey Wolf Drlg	4	dsl	1500	EMSCO GB800	800	12,500
Nicor Drlg	81	dsl-mech	900	IDECO H40	550	
Southland Drlg	3	dsl	1300	BRWSTR N75	750	11,000
Woolf & Magee	4	dsl	850	IDECO H35	500	10,000
BIENVILLE						
Noble Drlg	E553	dsl	800	EMSCO A550	800	12,000
Transcontinental Drlg-Shreveport	83	dsl	1000	GAR-DEN 800	1000	15,000

LOUISIANA (Cont'd)

Contractor	Rig No.	Type Power	Total HP All Main Mud Pumps	Drawworks Make and Model	Total HP Available to Drwwks	Rated Depth with 4½" Pipe
BOSSIER						
Butler Johnson	4	dsl	1200	BRWSTR N75	1200	12,500
	12	dsl	1300	GAR-DEN M700	1300	12,500
	1	dsl	1900	BRWSTR N85	1900	15,000
	6	dsl	2000	BRWSTR N85	1900	15,000
	7	dsl	1200	NATL 55	1200	12,500
Continental Drlg	11	dsl-elec	2600	IDECO E1700	1700	19,000
D B Drlg-Shreveport	27	dsl	750	NATL 50A	750	11,000
	18	dsl	1040	Schaffer SC800	1040	14,000
	28	dsl	1650	EMSCO EDA	1650	16,000
Guthrie McLaren Drlg	5	dsl	750	NATL 50CA	400	8,500
Justiss Oil	11	dsl	1200	EMSCO GB800	1600	14,000
	5	dsl	450	BETH S45E	300	6,500
Legersen Drlg	6	dsl-elec	2000	IDECO 2500E	2500	22,000
Remco Drlg	1	dsl	900	CABOT/FRANKS 2042	475	10,000
	2	dsl	1200	BRWSTR TR800	800	12,000
Sawyer Drlg & Serv	12	dsl	900	WILSON Giant	900	12,000
Transcontinental Drlg-Magnolia	86					
Vista Drlg	33	dsl	1000	BRWSTR N7	1000	12,000
CADDO						
Bailey Drlg	4	dsl	500	UNIT 31	350	6,500
France Drlg	6	dsl	1300	NATL 610	900	13,000
	1	dsl	1600	GAR-DEN 700	900	13,000
Noble Drlg	N-58	dsl	800	NATL 55	800	12,000
Sawyer Drlg & Serv	13	dsl	400	WILSON Giant	400	9,000
Transcontinental Drlg-Shreveport	93					
Transcontinental-Magnolia	1	dsl	350	EMSCO GB250T	350	6,500
	2	gas	500	EMSCO GB350	500	8,500
Vista Drlg	31	dsl	600	BRWSTR N4	400	7,100
Wheless Drlg	1	dsl-el-scr	3200	EMSCO C2 II	2000	25,000
CALCASIEU						
Explorer Drlg	24	dsl	2000	M-CSCO U36	800	10,000
	16	dsl	1350	M-CSCO U1220E13	3300	25,000
Grey Wolf Drlg	9	dsl-elec	3000	EMSCO CZ11	2000	25,000
	2	dsl-elec	3000	EMSCO C11	2000	25,000
Kelley & Kerr Drlg	Paso Grande	dsl	1400	OIME SD5	800	12,000
M G F Drlg-Lafayette	44	dsl	2000	M-CSCO U914	1500	18,000
Merit Drlg	4	dsl-scr	2800	OILWELL 2000E	2000	25,000
Moran Drlg	38	dsl-el-scr	3200	EMSCO C2 Type II	2000	25,000
CAMERON						
American Well Serv & Drlg	11	dsl	1700	BRWSTR HI4610A38	575	8,000
Bailey Drlg, Pernie	2	dsl	2000	NATL 80B	1950	14,000
CRC Mallard Well	19	dsl	1300	WILSON 90	800	14,500
Delta Drlg	82	dsl-scr	3200	EMSCO C2 Type II	3456	25,000
	47	dsl	2300	NATL 130	2250	20,000
Eljay Drlg	1	dsl-scr	2800	OILWELL E2000	2000	25,000
Glasscock Drlg	68	dsl	2700	NATL 1320	2700	20,000
	64	dsl	2200	NATL 110	1700	16,000
	74	dsl	1600	NATL 1625M	3000	30,000
Grey Wolf Drlg	3	dsl-elec	3000	EMSCO ECB	2000	25,000
Nicor Drlg	68	dsl	2100	M-CSCO U712A	1200	16,000
Nowotny & Conley Drlg	1	dsl	2000	OIME SL-1000	1200	15,000
NL Well Serv	298	dsl				
Quarles Drlg (LA)	17	dsl	3800	NATL 160E	3800	
	16	dsl	2000	IDECO Super 711	2100	17,000
CATAHOULA						
Justiss Oil	39	dsl	300	JFJ 6500	400	6,500
New & Hughes Drlg	5	dsl	450	Spencer 5000	500	7,000
CLAIBORNE						
Butler-Johnson	5	dsl	1800	BRWSTR N95	1800	20,000
H & S Drlg	2	dsl	1700	BRWSTR N95	2145	14,000
Noble Drlg	N-81	dsl	1420	NATL 80	1420	14,000
Sawyer Drlg & Serv	14	dsl	540	Duggan DS5	540	9,500
	6	gas	1200	BRWSTR N75	1200	13,000
Transcontinental Drlg-Shreveport	23	dsl	1000	BRWSTR N75	1000	12,000
CONCORDIA						
D & D Drlg	3	dsl	450	BRWSTR N45	500	8,200
	1	dsl	325	BRWSTR N4A	350	8,000
DE SOTO						
Exeter Drlg Southern	57	dsl	1500	EMSCO D3	1500	16,000
H & S Drlg	1	dsl	1700	BRWSTR N95	2145	14,000
Transcontinental Drlg-Shreveport	94					
Verna Corp	23	dsl	550	M-CSCO U15	600	10,000
EAST BATON ROUGE						
Explorer Drlg	26	dsl	2000	UNIT 712EA	2730	16,000
Glasscock Drlg	66	dsl	2700	NATL 1320	2700	20,000
JFP Well Serv	4	dsl	2000	OILWELL E2000	2000	25,000

LOUISIANA (Cont'd)

Contractor	Rig No.	Type Power	Total HP All Main Mud Pumps	Drawworks Make and Model	Total HP Available to Drwwks	Rated Depth with 4½" Pipe
EAST BATON ROUGE (Cont'd)						
Loffland Bros	330	dsl	2400	M-CSCO U1220	2775	22,000
	21	dsl-elec	3200	M-CSCO U1220EBD	2500	30,000
	114	dsl-elec	3300	M-CSCO U1220EBD	3300	30,000
	116	dsl-elec	3300	M-CSCO U1220EBD	3300	30,000
Noble Drlg	OW-21	dsl-elec	3300	OILWELL E2000	3300	25,000
Parker Drlg	174	dsl	3000	OIME Hercules 3000E	3000	30,000
Penrod Drlg	2	dsl	2800	EMSCO C2	3425	25,000
	4	dsl	3425	EMSCO C3	2200	30,000
	110	dsl	1600	NATL 1625M	2200	30,000
	5	dsl-elec	3425	EMSCO C3	3200	30,000
EAST FELICIANA						
New & Hughes Drlg	8	dsl	1200	NATL 80B	1200	15,000
EVANGELINE						
Penrod Drlg	14	dsl	3075	BRWSTR N12A	1840	20,000
Wilson Bros Drlg	12	dsl	1850	NATL 110	1850	16,000
FRANKLIN						
Energy Drlg	3	dsl	2000	EMSCO D3	2000	18,000
Justiss Oil	15	dsl	450	BETH 45E	300	6,500
GATAHALA						
Helmerich & Payne Intl Drlg	75	dsl	3300	NATL 1625M	3645	30,000
GRANT						
Butler-Johnson	9	dsl	1200	GAR-DEN 700	1200	12,000
HOLLY BEACH						
Williams Drlg	2	dsl-elec	3200	GAR-DEN 1500	2000	25,000
IBERIA						
Bailey Drlg, Pernie	1	dsl	1500	BRWSTR N75	850	12,000
CRC Mallard Well	17	dsl	1300	WILSON 90	800	14,500
IBERVILLE						
Bailey Drlg, Pernie	7	dsl	1200	GAR-DEN 800	1200	11,000
M G F Drlg-Lafayette	42	dsl	1500	OILWELL 96	1500	16,000
Woolf & Magee	12	dsl	850	IDECO H35S	500	10,000
IRWINVILLE						
Dual Drlg	9	dsl	3200	NATL 1320M	2000	25,000
JACKSON						
Comet Drlg	14	dsl	2600	GAR-DEN 1500	2600	25,000
Culver Drlg	14	dsl	2400	M-CSCO U914	2400	16,000
	20	dsl	2000	NATL 1320	2000	25,000
JEFFERSON						
Explorer Drlg	6	dsl	1300	M-CSCO	2730	20,000
NL Well Serv	11	dsl	500	NATL 55	1100	10,000
Wilson Bros Drlg	4	dsl	2600	NATL 110	2700	20,000
JEFFERSON DAVIS						
Comet Drlg	4	dsl	1700	BRWSTR N75	900	12,000
Explorer Drlg	18	dsl	1300	CABOT/FRANKS 2650	2000	13,500
Richards Drlg	12	dsl	1700	RMI 1000	1400	14,000
Wilson Bros Drlg	8	dsl	1750	NATL 110	1750	16,000
	23	dsl-elec	2800	OILWELL E2000	2000	25,000
LA SALLE						
Justiss Oil	17	dsl	350	BETH S45E	350	7,500
	37	dsl	200	JFJ500	225	5,000
LAFAYETTE						
Butler-Johnson	15	dsl	1000	NATL 80B	1950	15,000
Cliffs Drlg	26	dsl	2000	NATL 110	1650	18,000
Dual Drlg	21	dsl	2600	EMSCO C1	1500	22,000
Explorer Drlg	20	dsl	800	BRWSTR TR800	2000	11,000
Glasscock Drlg	67	dsl	2700	NATL 1320	2700	20,000
Grey Wolf Drlg	6	dsl-elec	3000	EMSCO CII	2000	25,000
JFP Well Serv	6	dsl	2000	OILWELL E2000	2000	25,000
Nowotny & Conley Drlg	7	dsl	1600	NATL 610	800	13,000
Williams Drlg	1	dsl-elec	3200	GAR-DEN 1500	2000	25,000
Wilson Bros Drlg	9	dsl	2600	NATL 110	2700	20,000
	3	dsl	2600	NATL 1320	2700	30,000
	8	dsl	2600	NATL 1320	2700	30,000
	11	dsl	2400	NATL 110	2700	20,000
LAFOURCHE						
American Well Serv & Drlg	14	dsl	1700	BRWSTR HI4610A	575	10,500
Cliffs Drlg	30	dsl	2600	NATL 1320	2475	25,000
CRC Mallard Well	20	dsl	1300	WILSON 90	800	14,500
Delta Drlg	97	dsl	2000	EMSCO J1100	1560	16,000
Loffland Bros	145	dsl	2965	M-CSCO U1220	2955	20,000
M G F Drlg-Lafayette	47	dsl	1800	IDECO S711	1500	18,000
Murco Drlg	26	dsl	2800	OILWELL N2000-B	3000	30,000
Quarles Drlg (LA)	18	dsl	2250	GAR-DEN 800	1500	13,500
Resource Drlg	RD-22	dsl	3105	NATL 1320	3740	25,000

LOUISIANA (Cont'd)

Contractor	Rig No.	Type Power	Total HP All Main Mud Pumps	Drawworks Make and Model	Total HP Available to Drwwks	Rated Depth with 4½" Pipe
LIBERTY						
Goldrus Drlg	15	dsl	1740	BETH M810	1560	16,000
LINCOLN						
Butler-Johnson	8	dsl	2300	GAR-DEN 1500	2200	20,000
	3	gas-btne	1200	EMSCO A550	1200	13,500
Rosamond Drlg	9	dsl	925	GAR-DEN 700	1300	16,000
Sawyer Drlg & Serv	10	gas	1200	Whlnd 1000	1200	13,000
	9	dsl	800	BRWSTR N45-M	800	10,000
	3	dsl	1100	BRWSTR N7	1100	12,000
Transcontinental-Magnolia	5	dsl	1050	OILWELL 76	1050	11,500
Whaless Drlg	4	dsl	1800	EMSCO J1100	1800	16,000
LIVING						
Cliffs Drlg	16	dsl	2600	NATL 1320	2475	25,000
LIVINGSTON						
Cliffs Drlg	24	dsl	2600	NATL 1320	2475	25,000
Goldrus Drlg	14	dsl-elec	1200	BRWSTR N75	1176	13,000
Grey Wolf Drlg	8	dsl-elec	3000	EMSCO CZ II	2000	25,000
Helmerich & Payne Intl Drlg	83	dsl-scr	2800	OILWELL E2000	2000	26,000
JHJ Drlg	4	dsl	1000	OIME SL7	1400	17,000
Marion Drlg	2	dsl	2400	EMSCO C1	2400	20,000
MADISON						
Continental Drlg	42	dsl-elec	3200	IDECO E2100	2100	25,000
MONROE						
Transcontinental Drlg-Jackson	18					
NATCHITOCHES						
Penrod Drlg	28	dsl	3425	NATL 1320M	2200	25,000
OUACHITA						
Justiss Oil	38	dsl	2600	EMSCO J1100	2600	20,000
Underwood Oil Well Serv	12	dsl	350	BRWSTR N3	350	4,000
PLAQUEMINES						
CRC Mallard Well	15	dsl	1300	WILSON 90	800	14,500
Explorer Drlg	10	dsl	1836	Beth	1750	12,500
M G F Drlg-Lafayette	41	dsl	1600	OILWELL 96	1600	15,000
NL Well Serv	4	dsl				
	6	dsl	800	GAR-DEN 700	700	12,000
	7	dsl	800	GAR-DEN	700	12,000
Quarles Drlg (LA)	20	dsl	4200	IDECO 3000E	4200	30,000
POINTE COUPEE						
Comet Drlg	12	dsl	1700	CABOT 1200	1200	13,500
Decca Drlg	25	dsl	1000	IDECO Super 750	800	12,500
	23	dsl	1800	NATL 1320M	2700	25,000
	21	dsl	1600	UNIT 914C	2100	18,000
Delta Drlg	76	dsl-scr	3200	GAR-DEN 3000RE	4600	30,000
Dual Drlg	28	dsl	3400	OILWELL E3000	2000	30,000
Eljay Drlg	3	dsl-scr	3400	OILWELL E3000	3000	30,000
	4	dsl-scr	3400	OILWELL E3000	3000	30,000
Goldrus Drlg	1	dsl-elec	2000	OILWELL E3000	3000	30,000
M G F Drlg-Lafayette	401	dsl-elec	1600	NATL 320UE	2000	25,000
Parker Drlg	165	dsl	3000	OIME Hercules 3000E	3000	30,000
	175	dsl	3000	OIME Hercules 3000E	3000	30,000
Penrod Drlg	1	dsl	3425	NATL 1625M6	2200	30,000
	122	dsl	1300	NATL 1625M	2000	25,000
	17	dsl	2600	NATL 1320M	3425	25,000
POLK						
Goldrus Drlg	5	dsl-elec	3400	OILWELL E2000	1700	20,000
PONCHATOULA						
Dual Drlg	22	dsl	3200	NATL 1320M	2000	22,000
QUACHITA						
D B Drlg-Shreveport	29	dsl	1350	NATL 75CB	1350	14,000
RAPIDES						
Justiss Oil	8	dsl	450	EMSCO GA500	900	11,000
Par-Co Drlg	4	dsl	700	WILSON 42	500	8,000
RED RIVER						
Bailey Drlg, Pernie	3	dsl	2000	BRWSTR N12		18,000
SABINE						
Murco Drlg	34	dsl	2200	OILWELL N760	1350	15,000
Resource Drlg	12	dsl	3105	NATL 1625	3740	30,000
Wilson Bros Drlg	10	dsl	2200	NATL 110	2100	20,000
ST BERNARD						
CRC Mallard Well	18	dsl	1300	WILSON 90	800	14,500
NL Well Serv	15	dsl	2400	BRWSTR N95	1600	18,000
	8	dsl	400	IDECO H35	350	6,000
	17	dsl	1300	BRWSTR N75	1200	
	14	dsl	2400	BRWSTR N95	1600	18,000
ST HELENA						
Glasscock Drlg	72	dsl	800	NATL 80B	1250	12,000
Mid-America Drlg & Expl	2	dsl	1100	UNIT U36A	800	13,000
Transcontinental Drlg-Jackson	14					
ST LANDRY						
American Well Serv & Drlg	15	dsl	1700	BRWSTR DH14610	900	12,000
Great Southern Oil & Gas	37	dsl	1000	IDECO	636	10,000
Nicklos Drlg	79	dsl-elec				
Nicor Drlg	76	dsl-mech	1825	NATL 75	750	15,000
NL Well Serv	277	dsl				
	269	dsl	304	CABOT/FRANKS 1287	300	
	247	dsl	700	CABOT/FRANKS 2042	600	7,500
	286	dsl	1000	CABOT/FRANKS 2550HL	1500	16,000
	267	dsl	700	CABOT/FRANKS 2042	800	7,500
ST MARTIN						
Delta Drlg	25	dsl	2300	EMSCO C1 Type III	2592	18,000
	16	dsl	2600	NATL 130	2250	25,000
Glasscock Drlg	71	dsl	1100	NATL 110	1500	20,000
Great Southern Oil & Gas	42	dsl	665	IDECO	636	10,000
Helmerich & Payne Intl Drlg	41	dsl	1650	NATL 110	1815	22,000
ST MARY						
Bailey Drlg, Pernie	8	dsl	2000	NATL 110M	1500	20,000
Goldrus Drlg	8	dsl-elec	1750	OILWELL 840E	1700	18,000
Noble Drlg	N-131	dsl	2130	NATL 130	2130	18,000
	OW-31	dsl-elec	3135	OILWELL E3000	3135	25,000
Republic Drlg	11	dsl-elec	2000	OILWELL 700E	1000	14,000
Resource Drlg	RD-30	dsl	3105	NATL 1625	3740	30,000
Sanders Drlg	2	dsl	3200	BRWSTR N12A	3000	25,000
TANGIPAHOA						
Challenger Drlg	34	dsl	1200	BRWSTR N75	1500	12,000
Resource Drlg	11	dsl	3105	NATL 1625	3740	30,000
TENSAS						
Rosamond Drlg	7	dsl	1450	BRWSTR N10	1275	13,500
TERREBONNE						
Bailey Drlg, Pernie	5	dsl	1500	NATL 55	1100	12,000
Cliffs Drlg	18	dsl	2600	NATL 110	2475	20,000
Comet Drlg	6	dsl	2550	IDECO Super 7-11	1700	18,000
CRC Mallard Well	12	dsl	800	WILSON Model 90	800	11,000
Goldrus Drlg	7	dsl	1750	BRWSTR N95	1560	16,000
Loffland Bros	103	dsl-elec	3300	M-CSCO U1220EBD	3300	30,000
Nicor Drlg	72	dsl	2800	NATL 1320M	2000	25,000
NL Well Serv	18	dsl	1200	BRWSTR N75	1200	12,000
	3	dsl				
Penrod Drlg	29	dsl	3425	NATL 1320M	2200	25,000
Quarles Drlg (LA)	21	dsl	3600	OILWELL 940E	3600	20,000
UNION						
Butler-Johnson	10	dsl	1500	GAR-DEN M800	1500	14,000
Sawyer Drlg & Serv	7	gas	900	IDECO 750	900	13,000
VERMILION						
Bailey Drlg, Pernie	6	dsl	3000	NATL 110M	3000	18,000
Bay Drlg	1	dsl	3600	NATL 1320M	3600	25,000/5"
Cliffs Drlg	28	dsl	2600	NATL 1320	2475	25,000
	31	dsl	2600	NATL 110	2475	20,000
CRC Mallard Well	14	dsl	1300	WILSON 90	800	14,500
	11	dsl	800	WILSON Model 90	800	11,000
Delta Drlg	85	dsl-scr	2900	EMSCO C2 Type II	3456	25,000
	96	dsl-elec	2600	EMSCO C1 Type II	3456	20,000
Diamond M Land Drlg	174	dsl	2600	NATL 110M	2550	16,000
Glendel Drlg	6	dsl-elec	2000	GAR-DEN 1100E	2000	18,000
Grey Wolf Drlg	7	dsl-elec	3000	EMSCO C11	2000	25,000
	5	dsl-elec	3000	EMSCO EDA	2000	25,000
NL Well Serv	268	dsl	300	CABOT/FRANKS 1287	456	5,000
	16	dsl		IDECO H35		
Penrod Drlg	27	dsl	2600	EMSCO C2	2000	25,000
Quarles Drlg (LA)	22	dsl	4800	OILWELL 3000	4800	30,000
Resource Drlg	1	dsl	3105	NATL 1320	3740	25,000
VERNON PARISH						
Dual Drlg	11	dsl	2800	OILWELL 860	1400	18,000
WASHINGTON						
Tesoro Drlg	6	dsl	2600	NATL 1625M	2742	30,000
WEBSTER						
Mosley Well Serv	7	dsl		CABOT/FRANKS	475	10,000

LOUISIANA (Cont'd)

Contractor	Rig No.	Type Power	Total HP All Main Mud Pumps	Drawworks Make and Model	Total HP Available to Drwwks	Rated Depth with 4½" Pipe
WEBSTER (Cont'd)						
Nelson Drlg & Well Serv	2	dsl	1000	BRWSTR N75	1000	13,000
	1	dsl	600	Spencer 7000	600	10,000
Whaless Drlg	2	dsl	1200	EMSCO D2	1200	11,000
WEST BATON ROUGE						
Exeter Drlg Southern	32	dsl	2800	GAR-DEN 1500	2800	25,000
Goldrus Drlg	22	dsl	1250	CABOT/FRANKS 1000	872	13,500
Parker Drlg	180	dsl	3000	OIME Hercules 3000E	3000	30,000
Tesoro Drlg	8	dsl	3200	NATL 1320	3600	30,000
WEST FELICIANA						
Delta Drlg	35	dsl-el-scr	2800	EMSCO C1 Type II	3100	20,000
Helmerich & Payne Intl Drlg	40	dsl	1650	OILWELL 860	1815	20,000
Loffland Bros	115	dsl-elec	3300	M-CSCO U1220EBD	3300	30,000

MICHIGAN

Contractor	Rig No.	Type Power	Total HP All Main Mud Pumps	Drawworks Make and Model	Total HP Available to Drwwks	Rated Depth with 4½" Pipe
ALLEGAN						
Nicor Drlg	52	dsl-mech	600	BRWSTR DH14210	550	8,400
ANTRIM						
Cactus Drlg Corp	12	dsl	800	OILWELL 66	800	10,000
BENZIE						
Nicor Drlg	24	dsl	650	IDECO H525	850	8,500
CALHOUN						
Bigard Drlg, James	3	dsl	535	CABOT/FRANKS 550	550	7,500
GRAND TRAVERSE						
Bigard Drlg, James	10	dsl	700	IDECO H44	600	8,500
Cactus Drlg Corp	17	dsl	800	BRWSTR N55	800	11,000
Energy Services	4	dsl	500	IDECO DI7015	600	7,500
L & G Drlg	3	dsl	500	EMSCO GB350	600	10,000
	2	dsl	500	WILSON 65	600	8,000
HILLSDALE						
Scott Drlg, Don	5	dsl	1000	IDECO H1000	900	8,000
INGHAM						
Bigard Drlg, James	9	dsl	600	IDECO H44	600	8,500
ISABELLA						
Bigard Drlg, James	7	dsl	600	IDECO H37	535	7,500
	16	dsl	475	IDECO H44	600	8,500
Energy Services	5	dsl	949	IDECO H35	445	5,500
McLachlan Drlg	3	dsl	1060	IDECO H44	700	10,000
	1	dsl	650	IDECO H35	300	5,500
	2	dsl	900	IDECO H37	450	7,500
Nicor Drlg	53	dsl-mech	500	BRWSTR DH14210	550	8,400
KALKASKA						
Bigard Drlg, James	15	dsl	600	IDECO H1000	1000	12,000
	14	dsl	600	IDECO H1000	1000	12,000
Cactus Drlg Corp	21	dsl	800	BETH M58	800	12,000
	28	dsl	800	NATL 50A	800	10,000
Provins Drlg, T D	5	dsl	1200	IDECO 1000	1000	12,000
MANISTEE						
Bigard Drlg, James	8	dsl	600	IDECO H44	600	8,500
Miller Expl	3	dsl	750	OIME SL5	1000	18,000
Provins Drlg, T D	2	dsl	1200	IDECO H37	456	8,000
MECOSTA						
Provins Drlg, T D	7	dsl	1200	IDECO H1000	1000	12,000
MISSAUKEE						
Bigard Drlg, James	12	dsl-elec	1000	IDECO ED1200	2000	20,000
L & G Drlg	1	dsl	398	IDECO H35	398	5,000
Provins Drlg, T D	6	dsl	1125	IDECO 700	700	9,000
	10	dsl	1200	IDECO H1000	1000	12,000
	8	dsl	1200	IDECO H1000	1000	12,000
NEWAYGO						
Bigard Drlg, James	17	dsl	550	WILSON 75	900	12,000
OSCEOLA						
Provins Drlg, T D	9	dsl	2100	CABOT/FRANKS 2550HL	1800	20,000
OTSEGO						
Cactus Drlg Corp	16	dsl	800	NATL 50A	800	10,000
PRESQUE ISLE						
Provins Drlg, T D	3	dsl	1200	IDECO 1000	900	10,000

MICHIGAN (Cont'd)

Contractor	Rig No.	Type Power	Total HP All Main Mud Pumps	Drawworks Make and Model	Total HP Available to Drwwks	Rated Depth with 4½" Pipe
TUSCOLA						
Provins Drlg, T D	4	dsl	1000	Cooper 550	500	8,000
WEXFORD						
Cardinal Drlg	21	dsl	1000	EMSCO GC500	1000	12,500

MISSISSIPPI

Contractor	Rig No.	Type Power	Total HP All Main Mud Pumps	Drawworks Make and Model	Total HP Available to Drwwks	Rated Depth with 4½" Pipe
UNDESIGNATED						
Wilcox Drillers	6	dsl	555	BETH S45A	400	7,000
	7	dsl	300	BETH 545A		8,000
ADAMS						
Energy Drlg	1	dsl	400	BETH S45A	500	9,000
New & Hughes Drlg	9	dsl	450	Spencer 5000	550	7,000
	3	dsl	450	Spencer 6000	550	7,000
	6	dsl	450	BETH C50	600	11,000
	10	dsl	900	EMSCO GB500	600	11,500
	12	dsl	800	WILSON Giant	800	13,000
Par-Co Drlg	3	dsl	700	Spencer 7000	500	7,000
CALHOUN						
Delta Drlg	65	dsl	2300	EMSCO C1 Type III	2592	18,000
CLARKE						
Nicor Drlg	78	dsl-mech	2125	NATL 100	750	14,000
SEE Land Drlg	11	dsl	945	EMSCO SDR	500	9,000
	7	dsl	1200	BRWSTR N4	325	6,500
Transcontinental Drlg-Jackson	12					
FRANKLIN						
Energy Drlg	2	dsl	535	IDECO H35S	540	9,500
GRAND TRAVERSE						
Nicor Drlg	21	dsl	800	IDECO H35	510	7,000
HANCOCK						
Penrod Drlg	112	dsl	1600	NATL 1625M	3000	30,000
	10	dsl	2600	NATL 1320M	3425	25,000
HINDS						
Delta Drlg	56	dsl	2600	WILSON Super 250	2592	25,000
JASPER						
Chesley Pruet Drlg	12	dsl	3600	EMSCO C2	3600	25,000
Justiss Oil	24	dsl	3600	EMSCO J1400	3000	22,000
Murco Drlg	46	dsl-scr	2800	OILWELL E2000	2000	30,000
Par-Co Drlg	1	dsl	300	IDECO H30	300	6,000
Transcontinental Drlg-Jackson	85					
JEFFERSON						
Justiss Oil	16	dsl	600	EMSCO GB	900	12,000
Wilcox Drillers	5	dsl	700	BETH S45E	550	8,500
JEFFERSON DAVIS						
Marion Drlg	6	dsl	3300	EMSCO Model C3	3300	30,000
Murco Drlg	22	dsl	2400	BRWSTR N95	2400	20,000
JONES						
Chesley Pruet Drlg	16	dsl	3600	EMSCO C2	3600	30,000
Henley Drlg	5	dsl-elec	2600	EMSCO C1	1650	18,000
JHJ Drlg	6	dsl	1000	OIME SL7	1400	17,000
	2	dsl	1300	BRWSTR NE95A	1700	20,000
Marion Drlg	9	dsl-elec	2600	EMSCO C2	3000	25,000
New & Hughes Drlg	14	dsl	1500	EMSCO C2	2000	22,000
Penrod Drlg	24	dsl	2600	BRWSTR N12A	1950	25,000
Rapad Drlg	6	dsl-elec	2000	EMSCO D3	1000	16,000
Tesoro Drlg	7	dsl	2000	NATL 80B	1650	15,000
LAMAR						
Justiss Oil	23	dsl	1800	EMSCO J1100	2400	20,000
Marion Drlg	5	dsl	2400	OILWELL M2000	2400	25,000
LAWRENCE						
Marion Drlg	4	dsl	2400	EMSCO Model C2	2400	25,000
	1	dsl	1800	EMSCO Model M810	1800	18,000
Rapad Drlg	4	dsl-elec	4000	EMSCO C1	2000	25,000
MADISON						
Helmerich & Payne Intl Drlg	72	dsl	2835	OILWELL 3000M	2835	30,000
MARION						
JHJ Drlg	5	dsl	1000	OIME SL7	1400	17,000
Marion Drlg	8	dsl-elec	2400	EMSCO C1	2400	20,000
Noble Drlg	E1102	dsl	1870	EMSCO A1100	1870	18,000
Penrod Drlg	109	dsl	2000	BRWSTR N75A	1760	15,000
Tesoro Drlg	3	dsl	2600	NATL 1320M	2742	25,000

Contractor	Rig No.	Type Power	Total HP All Main Mud Pumps	Drawworks Make and Model	Total HP Available to Drwwks	Rated Depth with 4½" Pipe
MISSISSIPPI (Cont'd)						
MONROE						
Apollo Drlg Inc	5	dsl	500	NATL 370	550	10,500
Rapad Drlg	5	dsl	950	NATL 370	950	12,000
MONTGOMERY						
Resource Drlg	10	dsl	2330	NATL 110	2740	18,000
PEARL RIVER						
JHJ Drlg	1	dsl-scr	1300	BRWSTR NE95A	1700	20,000
PIKE						
New & Hughes Drlg	11	dsl	900	EMSCO GA500	600	11,500
SEE Land Drlg	3	dsl	1200	GAR-DEN 500	500	9,000
	15	dsl	900	GAR-DEN 1100	1500	18,000
RANKIN						
Chesley Pruet Drlg	15	dsl	4800	EMSCO C3	4800	30,000
Helmerich & Payne Intl Drlg	77	dsl-elec	2200	NATL 110UE	2430	18,000
JHJ Drlg	3	elec-scr	1600	BRWSTR NE12A	2000	25,000
RICHLAND						
Nicor Drlg	59	dsl	1400	NATL 55M	700	14,500
SCOTT						
Murco Drlg	10	dsl	2200	BRWSTR N95	2400	20,000
SIMPSON						
Helmerich & Payne Intl Drlg	74	dsl	3300	OILWELL	3695	30,000
	86	dsl-el-scr	4250	NATL 1625DE	4250	30,000
Transcontinental Drlg-Jackson	91					
	92					
SMITH						
Tesoro Drlg	1	dsl	2600	NATL 1320M	2742	25,000
Transcontinental Drlg-Jackson	84					
WALTHAL						
Exeter Drlg Southern	15	dsl	2550	GAR-DEN 1100	1550	18,000
WARREN						
Exeter Drlg Southern	16	dsl	2600	GAR-DEN 1500	2600	25,000
Justiss Oil	35	dsl	1250	EMSCO J1400	1200	18,000
	7	dsl	1800	EMSCO J1400	2900	20,000
Penrod Drlg	12	dsl	3850	GAR-DEN 1500	2120	20,000
Wilson Bros Drlg	2	dsl	1900	NATL 110	1900	20,000
WILKINSON						
Penrod Drlg	120	dsl	1600	NATL 1625M	3000	30,000
Rebel Drlg	3	dsl	500	IDECO H30	400	9,000
YAZOO						
New & Hughes Drlg	7	dsl	500	M-CSCO U34	525	8,000
MONTANA						
UNDESIGNATED						
Apollo Drlg	6	dsl	1020	OILWELL 76	1020	12,000
Hussar Drlg	2	dsl	450	EMSCO Modified 150	300	6,500
Spartan Drlg	11	dsl	600	Superior 700	1000	10,000
Titan Drlg	2	dsl	1000	OILWELL 760E	1000	16,000
BEAVERHEAD						
Cardinal Drlg	17e	elec	1000	EMSCO D3	1000	18,000
BIG HORN						
Anderson-Myers Drlg	3	dsl	1200	EMSCO G500	1200	11,000
BILLINGS						
Brinkerhoff-Signal	1	dsl	1100	GAR-DEN 800	1100	13,000
BLAINE						
K B Drlg	1	dsl	278	Crdwll A150A Double Drum	185	4,500
CARBON						
Anderson-Myers Drlg	9	dsl	1200	NATL 55	1200	12,000
DANIELS						
Grace-Bomac Drlg	34	dsl	700	BRWSTR N7	700	10,000
Nicor Drlg	61	dsl	1550	NATL 610	750	12,000
DAWSON						
Anderson-Myers Drlg	5	dsl	1000	EMSCO GB500	820	10,000
Grace-Bomac Drlg	59	dsl	1650	NATL 80B	1650	16,000
Penrod Drlg	101	dsl	1684	BRWSTR N46	1080	10,000
Transcontinental Drlg-Denver	82	dsl	1000	GAR-DEN GD700	1470	12,500
FALLON						
Grace-Bomac Drlg	46	dsl	1200	NATL 610	1200	12,500
GLACIER						
Comanche Drlg Co	2	dsl	430	IDECO H30	400	5,000
General Well Serv	21	dsl	1342	Cooper LTD550	400	6,000
MONTANA (Cont'd)						
HILL						
Comanche Drlg Co	5	dsl	430	IDECO H30	400	5,000
Elenburg Expl	5	dsl	320	Wlkr-Nr CC2000	180	2,500
K B Drlg	2	dsl	278	Crdwll AH-91 Single Drum	185	5,000
JEFFERSON						
Bawden Drlg Ltd, Peter	14	dsl-scr	2600	NATL 1320UE	2000	22,000
LEWIS & CLARK						
Anderson-Myers Drlg	8	dsl	1800	NATL 80	1800	16,000
LIBERTY						
Elenburg Expl	10	dsl	320	Elenburg	430	6,000
McCONE						
Simmons Drlg	47	dsl	350	Troy M600	350	7,500
TMBR Drlg	19	dsl	700	NATL CA50	700	10,000
MEAGHER						
Molen Drlg	5	dsl	1200	BRWSTR N46	800	10,000
MUSSELSHELL						
Molen Drlg	1	dsl	400	EMSCO GB250T	350	6,500
True Drlg	4	dsl	450	EMSCO GA250T	500	6,500
PARK						
Cardinal Drlg	16e	dsl-elec	1000	EMSCO D3	1000	18,000
PHILLIPS						
Elenburg Expl	8	dsl	320	Wlkr-Nr CC2000	230	2,500
Molen Drlg	2	dsl	800	BRWSTR N46	800	10,000
PONDERA						
General Well Serv	6	dsl	1342	Crdwll MK210	1342	6,000
Simmons Drlg	31	dsl	350	Spencer 6000	350	6,500
POWELL						
Baltic Drlg	34	dsl	800	EMSCO GC350	550	8,500
PRAIRIE						
Cliffs Drlg	6	dsl	1600	NATL 610	1100	12,500
True Drlg	22	dsl	1200	NATL 55	1200	13,000
RICHLAND						
Blocker Drlg Canada	5	dsl	800	BRWSTR N75	1200	13,000
Blocker Drlg-Houston	55					14,000
	58					14,000
Challenger Drlg	1	dsl	900	EMSCO BC500	1000	11,000
Drilcon	3	dsl	784	NATL 50A	784	10,000
Grace-Bomac Drlg	35	dsl	2400	NATL 110M	2400	20,000
	39	dsl	1200	BRWSTR N75	1200	12,500
Kenting Drlg	2	dsl	1200	M-CSCO U40	1200	14,000
	11	dsl	1200	M-CSCO U40	1200	14,000
Noble Drlg	N-89	dsl	800	NATL 80B	800	13,000
	N-82	dsl	1200	NATL 80	1200	15,000
Spartan Drlg	33	dsl	1000	OIME 1500SL	1000	18,000
ROOSEVELT						
Apollo Drlg	8	dsl	1200	OILWELL 76	1200	10,500
Atco Drlg	17	dsl-elec	1800	NATL 610E	750	12,000
Bird Drlg	3	dsl	615	EMSCO 500	800	11,000
Cardinal Drlg	14	dsl	560	EMSCO GB350	840	8,500
Dixilyn-Field Drlg	37	dsl	1600	NATL 80UE	1800	15,000
Grace-Bomac Drlg	26	dsl	1125	GAR-DEN 500M	800	9,000
	50	dsl	1650	NATL 80B	1650	16,000
Transcontinental Drlg-Denver	46	dsl	2000	NATL 80B	1966	15,000
	31	dsl	1200	WILSON 90B	1354	15,000
ROSEBUD						
Atco Drlg	58	dsl-elec	1800	NATL 80UE	1800	15,000
Molen Drlg	3	dsl	700	NATL 50A	700	9,000
Soape Drlg	1	dsl	950	NATL 45	950	7,500
SHERIDAN						
Brinkerhoff-Signal	17	dsl	1560	NATL 80B	1560	14,000
Challenger Drlg	31	dsl	1200	BRWSTR N75	1200	12,000
Grace-Bomac Drlg	37	dsl	1100	GAR-DEN 700M	1100	12,500
Nicor Drlg	62	dsl	1000	NATL 610	750	12,500
Transcontinental Drlg-Denver	39	dsl	1100	GAR-DEN GD800	1300	13,500
TETON						
Aspen Drlg	1	dsl	400	EWBANKS 3500	475	3,500
Atco Drlg	6	dsl	1020	NATL 370	700	8,500
Molen Drlg	4	dsl	1350	BRWSTR N75A	1350	14,000
TOOLE						
Aikins Drlg	2	dsl	200	Bycyrus	200	3,000
Comanche Drlg Co	1	dsl	430	IDECO H30	400	5,000
Elenburg Expl	2	dsl	320	Wlkr-Nr CC2000	230	2,500
General Well Serv	22	dsl	400	Schramm T985HA	400	2,500

Contractor	Rig No.	Type Power	Total HP All Main Mud Pumps	Drawworks Make and Model	Total HP Available to Drwwks	Rated Depth with 4½" Pipe
MONTANA (Cont'd)						
VALLEY						
Drilcon	1	dsl	1125	BETH 450	1125	11,000
	5	dsl	715	IDECO H725	700	11,000
GCO Drlg	3	dsl	820	BDW 650M	650	10,000
Helmerich & Payne Intl Drlg	53	dsl-elec	1200	IDECO H525	800	12,000
YELLOWSTONE						
Molen Drlg	6	dsl-elec	3000	EMSCO C1 Type II	2000	22,000
NEBRASKA						
BOX BUTTE						
Banner Drlg	3	dsl	500	NATL T45	800	9,500
CHERRY						
Banner Drlg	4	dsl	400	Apache 25040	375	5,000
CHEYENNE						
Gear Drlg	2	dsl	300	NATL T32	325	6,000
DEUEL						
Western Well Drlg	3	dsl	350	Failing	350	4,000
DUNDY						
Murfin Drlg	3	dsl	400	NATL T25	400	6,000
HITCHCOCK						
Murfin Drlg	20	dsl	525	NATL 370	600	7,500
MOXA Drlg	1	dsl	540	IDECO 35	380	7,000
Stoeppelwerth Drlg	3	dsl	500	NATL 370	500	6,500
LINCOLN						
Stoeppelwerth Drlg	1	dsl	375	NATL T32	375	5,500
RED WILLOW						
Stoeppelwerth Drlg	2	dsl	350	Crdwll 500L	325	4,500
NEVADA						
CLARK						
Brinkerhoff-Signal	81	dsl-elec	2100	OILWELL 760E	2100	16,000
Continental Drlg	17	dsl-elec	2600	IDECO E1700	1700	19,000
Loffland Bros	211	dsl	1260	M-CSCO U15	1000	10,000
ELKO						
Loffland Bros	1	dsl	1290	M-CSCO U40	1440	13,000
Rio Grande Drlg	6	elec	1350	GAR-DEN 1500E	1195	25,000
WHITE PINE						
Montgomery Mountain Drlg	48	dsl	2000	NATL 110	2000	20,000
NEW JERSEY						
MORRIS						
New Jersey Drlg	T5	dsl	400	Ingersoll	400	5,000
NEW MEXICO						
UNDESIGNATED						
Arapahoe Drlg	10	gas-btne	700	NATL 50A	500	12,000
	3	gas-btne	300	WILSON Mogul	320	6,500
BERNALILLO						
Earl & Son Drlg	1	top drive	1500	Ingersoll	3800	1,500
CHAVES						
Artesia Fishing Tool	2	dsl	500	GAR-DEN	500	6,000
	1	dsl	400	MAYHEW 3000	200	4,000
Cactus Drlg Co	53	dsl	520	BETH S55	670	7,500
Collier Drlg	10	dsl	600	Challenger	475	5,500
Dual Drlg	30	dsl	1400	OILWELL 500	500	7,000
Kenai Drlg of New Mexico	31	dsl	650	MAC 300	400	6,500
L & M Drlg	1	dsl	750	G42	440	7,500
	2	dsl	750	GAR-DEN 3000	380	6,000
NEW MEXICO (Cont'd)						
CHAVES (Cont'd)						
La Rue Drlg	1	dsl	650	NATL T20	500	7,000
Tri-Service Drlg	2	dsl	1400	OILWELL 66	900	10,000
TMBR Drlg	30	dsl	350	UNIT U15	500	7,000
Verna Corp	5	dsl	500	WILSON Mogul	500	6,500
W E K Drlg	3	dsl	450	EMSCO S45E	440	6,500
Young Drlg	4	dsl	400	Crdwll K500	600	8,500
	5	dsl	750	Crdwll K500	600	8,000
CIBOLA						
Stewart Bros Drlg	48	dsl	324	Failing 2500	324	3,000
	50	dsl	324	Failing 2500	324	3,000
	53	dsl	324	GAR-DEN 15W	324	1,500
	18	dsl	324	Failing 2500	324	3,000
	15	dsl	324	Failing 3000	324	3,000
	49	dsl	324	Failing 2500	324	3,000
	54	dsl	1000	Failing 100	450	5,000
	47	dsl	324	Failing 2500	324	3,000
	52	dsl	324	GAR-DEN 15W	324	1,500
	17	dsl	324	Failing 2500	324	3,000
EDDY						
Ard Drlg	5	dsl	1986	M-CSCO U20	1800	15,000
	3	dsl	1400	M-CSCO U40	1200	15,000
	1	dsl	600	SPENCER	670	8,500
	2	dsl	1986	M-CSCO U20	1800	18,000
Cactus Drlg Co	73	dsl	454	EMSCO U34	454	6,000
Cactus Drlg Corp	25	dsl	1100	IDECO 711	1100	13,000
Dual Drlg	14	dsl	1900	OILWELL 760	1000	15,000
	19	dsl	1850	OILWELL 760	1000	16,000
Hondo Drlg	10	dsl	1250	BRWSTR N75A	1250	15,000
	11	dsl	1050	M-CSCO U15	700	10,000
Kenai Drlg of New Mexico	21	dsl	1350	UNIT U20	1350	15,000
	37	dsl	1750	NATL 100M	1750	18,000
M G F Drlg-Midland	22	dsl	1500	OILWELL 760	1500	15,000
	26	dsl	1725	GAR-DEN 1100	1725	19,000
	25	dsl	1725	BRWSTR N95	1725	19,000
McVay Drlg	10	dsl	1300	NATL 100	1300	16,000
	7	dsl	1200	NATL 75CA	1200	13,000
	9	dsl	1400	NATL 110	1400	18,000
Moranco	1	dsl	1100	OIME 1000SL	1000	15,000
Parker Drlg	2	dsl	1200	OIME SL1000P	1200	14,000
	161	gas	1000	NATL 75	1000	16,000
	58	dsl	1650	NATL 100M	1650	16,000
	34	gas	1000	NATL 75	1000	16,000
Quarles Drlg (OK)	15	dsl	2000	RMI 1000	1000	15,000
Resource Drlg	6	dsl	2330	NATL 110	2740	18,000
Rio Colorado Drlg	131	dsl	1100	IDECO H40	600	8,000
Sharp Drlg	72	dsl-elec	2160	OILWELL 840E	2430	22,000
	35	dsl	2331	BETH 1013	2742	23,000
T O T Drlg	4	dsl	1155	OIME SL5	1155	15,000
TMBR Drlg	7	dsl	700	NATL 75CA	700	13,000
Verna Corp	17	dsl	550	M-CSCO U15	650	11,500
	16	dsl	600	BRWSTR N14	450	6,500
W E K Drlg	1	dsl	770	M-CSCO U34	380	7,500
Warton Drlg	6	gas	1700	NATL 80B	1320	16,000
	3	dsl	3300	NATL 110	3300	18,000
	5	dsl	1270	NATL 50A	1370	11,000
LEA						
Ard Drlg	6	dsl	1200	M-CSCO U15	1200	11,500
	7	dsl	1200	M-CSCO U40	1200	14,000
Cactus Drlg Co	60	dsl	520	Beth S45E	454	6,500
	71	dsl	520	EMSCO U36A	950	10,000
	68	dsl	520	IDECO H30	454	6,000
Cactus Drlg Corp	27	dsl	2550	BRWSTR N20	2550	30,000
	23	dsl	2550	NATL 110	2550	14,000
	8	dsl	1200	BRWSTR N7	1200	11,000
Delta Drlg	3	dsl	2300	EMSCO C1 Type III	2331	18,000
Forex Neptune and/or Affil	50	dsl-elec	3200	GAR-DEN 1500E	2000	21,700
Hondo Drlg	6	dsl	1000	M-CSCO U15	700	10,000
	12	dsl	1250	GAR-DEN 800	1250	15,000
	5	dsl	1100	NATL 55C	800	13,000
	3	dsl	1100	BETH M58C	800	13,000
	1	dsl	875	M-CSCO U15	700	10,000
Kenai Drlg of New Mexico	22	dsl	1700	EMSCO J1100	1700	15,000
	36	dsl	650	WILSON Giant	700	10,500
	23	dsl	1800	EMSCO JB1250	1800	15,000
Kenai Drlg of Texas	14	dsl	700	EMSCO GC500	800	11,500
La Rue Drlg	2	dsl	500	GAR-DEN 3000	500	6,000
Landis Drlg	4	dsl	800	BRWSTR N45	700	10,000
	1	dsl	1000	BDW 650M	1000	13,000
	2	dsl	1000	BRWSTR N75	1350	14,000
	3	dsl	800	BRWSTR N55	900	11,500
M G F Drlg-Midland	23	dsl	1150	OILWELL 76	1150	13,500
McVay Drlg	4	dsl	850	NATL 75	850	12,000
	8	gas	1200	NATL 80B	1200	15,000
Mid-America Drlg & Expl	3	dsl	1750	UNIT U712A	1950	18,000
Moranco	6	dsl	750	BRWSTR N75	750	12,000
	9	dsl	750	BRWSTR N55	750	11,000
	10	dsl	1100	M-CSCO	750	11,000
	5	dsl	750	M-CSCO U15	750	11,000
	7	dsl	1100	BRWSTR N75	1000	15,000
	3	dsl	1100	M-CSCO 712A	1000	15,000
	2	dsl	1100	EMSCO GB800	1000	15,000
Parker Drlg	211	gas	1000	NATL 75	1000	16,000
	65	gas	1600	NATL 100M	1600	23,000
	38	gas	1200	NATL 100M	1200	18,000
	90	gas	1800	NATL 130	1800	25,000
	85	gas	1600	NATL 130	1600	23,000

NEW MEXICO (Cont'd)

Contractor	Rig No.	Type Power	Total HP All Main Mud Pumps	Drawworks Make and Model	Total HP Available to Drwwks	Rated Depth with 4½" Pipe
LEA (Cont'd)						
Republic Drlg & Serv	1	dsl-elec	1450	OILWELL 740E	1000	14,000
Resource Drlg	RD-23	dsl	1040	NATL 610	1220	12,000
Rio Colorado Drlg	142	dsl	1825	NATL 110	1650	18,000
Sharp Drlg	63	dsl	1500	EMSCO D3	1836	18,000
	65	dsl	1560	EMSCO D3	1836	18,000
	36	dsl	2331	BETH MC950	2742	22,000
	62	dsl	1132	EMSCO D3	1272	14,000
	32	dsl	1185	EMSCO 800	1482	16,500
T O T Drlg	1	dsl	1155	OIME SL5	1155	15,000
Tri-Service Drlg	8	gas-btne	750	OILWELL 76	750	13,000
	5	gas-btne	1800	OILWELL 760	1400	16,000
Verna Corp	34	dsl	1000	EMSCO A800	1200	15,000
	14	dsl	500	WILSON Mogul 42	550	7,000
	7	dsl	700	M-CSCO U15 Type	800	11,000
Vision Drlg	3	dsl	800	Wlkr-Nr 25040	425	6,000
W E K Drlg	2	dsl	1200	IDECO H35	480	12,000
Warton Drlg	7	dsl	1200	NATL 75	1300	13,000
	8		900	CABOT/FRANKS M750	635	7,000
	9	dsl-elec	750	NATL 610E	2100	14,000
	1	gas	1650	BRWSTR N75	1650	13,000
	4	gas	1300	NATL 100	1650	16,000
Willbros Drlg	1	dsl	1200	OILWELL 76	1200	14,000
	6	dsl	800	EMSCO G500	800	12,000
	5	gas	1100	BETH 450	1100	13,000
LUNA						
Willbros Drlg	7	dsl	1400	EMSCO A800	1400	16,000
QUAY						
Collier Drlg	12	dsl				7,000
RIO ARRIBA						
Arapahoe Drlg	6	dsl	300	NATL T32	350	8,000
	4	gas-btne	700	NATL 50A	500	12,000
Aztec Well Serv	124	dsl	600	WILSON 75	1100	10,000
	75	dsl	360	CRDWLL KM210	400	4,500
Bayless Drlg	2	dsl	750	CHALLENGER M280	400	4,000
Young Drlg	2	dsl	600	IDECO DIR701	600	8,500
ROOSEVELT						
Republic Drlg & Serv	6	dsl	800	IDECO 525	1000	10,000
	7	dsl	800	IDECO 525	1000	10,000
Vision Drlg	2	dsl	700	Wlkr-Nr 25040	425	6,000
ROSWELL						
Dual Drlg	31	dsl	1600	OILWELL 500	500	7,000
SAN JUAN						
Aztec Well Serv	56	dsl	400	WILSON Mogul	350	6,000
	171	dsl	600	WILSON M75	700	
	222		750	WILSON M75	1100	
	184	dsl	600	WILSON M75	1100	
	50	dsl	400	WILSON Mogul	350	6,000
Bayless Drlg	7	dsl	1500	GAR-DEN GD700	1200	13,000
	5	dsl	1500	COOPER LTO550	550	8,500
	1	dsl	1500	IDECO H1000	950	10,000
Energy Search Drlg	2	dsl	1500	CABOT/FRANKS 900	900	10,000
Four Corners Drlg	8	dsl	1500	Crdwll KB500	750	8,000
	11	dsl	1500	Crdwll KB500	636	8,000
	7	dsl	1500	Crdwll KB500	750	8,000
	10	dsl	1500	Crdwll Drlg	750	8,000
	12	dsl	1500	Crdwll KB500	636	8,000
	6	dsl	1500	Crdwll KB500	700	8,000
	9	dsl	1500	Crdwll KB500	750	8,000
	3	dsl	1500	Crdwll KB500	700	8,000
	5	dsl	1500	Crdwll KB500	700	8,000
LLL Drlg	2	dsl	1720	CABOT/FRANKS 750	860	10,000
Young Drlg	3	dsl	400	WILSON 75	600	8,500
SANDOVAL						
Brinkerhoff-Signal	78	dsl	1600	NATL 610	1100	12,500
Four Corners Drlg	2	dsl	1500	Crdwll KB500	700	8,000
SIERRA						
Cactus Drlg Corp	14	dsl	1200	OILWELL 66	1200	11,000
TMBR Drlg	12	dsl	700	NATL 50	600	10,500
TRAVIS						
Vision Drlg	1	dsl	600	Wlkr-Nr 25040	425	6,000
UNION						
Baker & Taylor Drlg	18	dsl	700	EMSCO GB250T	465	6,000

NEW YORK

Contractor	Rig No.	Type Power	Total HP All Main Mud Pumps	Drawworks Make and Model	Total HP Available to Drwwks	Rated Depth with 4½" Pipe
ALLEGHENY						
Fairman Drlg	7	dsl	350	IDECO H44	550	8,000
CATTARAUGUS						
Union Drlg	15	dsl	1200	IDECO BIR5525	425	6,000

NEW YORK (Cont'd)

Contractor	Rig No.	Type Power	Total HP All Main Mud Pumps	Drawworks Make and Model	Total HP Available to Drwwks	Rated Depth with 4½" Pipe
CHAUTAUQUA						
Caster Well Drlg	2	dsl		Jaswell		3,500
	1	dsl		Jaswell	150	2,400
Delta Drlg	78	dsl	250	IDECO H35KD	291	6,000
International Petr Serv	6	dsl	475	WILSON 42	475	7,500
	9	dsl	475	Challenger Model 320HD	360	4,500
	7	dsl	475	Challenger Model 320	360	4,000
Underwater Gas Dev	7	dsl	320	Challenger 320	320	5,000
	5	dsl	250	Failing 3500	250	5,000
	6	dsl	200	Ingersoll T5	350	5,000
	4	dsl	320	Challenger 320	320	5,000
	2	dsl	200	Ingersoll T-5	350	5,000
	1	dsl	250	Failing 3500	200	4,000
WYOMING						
International Petr Serv	2	dsl	275	CP-7000	375	4,000

NORTH DAKOTA

Contractor	Rig No.	Type Power	Total HP All Main Mud Pumps	Drawworks Make and Model	Total HP Available to Drwwks	Rated Depth with 4½" Pipe
UNDESIGNATED						
Bird Drlg	5	dsl	615	NATL 370	800	9,500
Titan Drlg	1	dsl	800	OILWELL 500	800	10,000
Westburne Drlg Canada	64	dsl	1680	UNIT U914C	1680	18,000
BILLINGS						
Bird Drlg	7	dsl	615	U36A	800	11,500
	8	dsl	615	NATL 610	800	13,000
Brinkerhoff-Signal	11	dsl	1500	NATL 80B	1500	15,000
Cardinal Drlg	7	dsl	864	EMSCO GB500	864	10,500
	1	dsl	864	BDW 800	1140	14,000
	11	dsl	864	BDW 800	1140	14,000
	10	dsl	1296	EMSCO GB800	1296	13,500
	22	dsl	1554	NATL 80B	1554	15,000
Enopco	2	dsl	1890	NATL 610	1080	13,000
Grace-Bomac Drlg	33	dsl	1650	OILWELL 96	1650	14,000
Helmerich & Payne Intl Drlg	88	dsl	1815	OILWELL 860	1815	16,000
Westburne Drlg	59	dsl	1100	IDECO M750D	800	10,000
BOTTINEAU						
Cardinal Drlg	3	dsl	400	NATL T20	400	5,500
	8	dsl	400	NATL T20	440	5,500
	12	dsl	560	SOS 6000	480	6,500
BOWMAN						
Kenai Drlg Rocky Mountain	26	dsl	1000	WILSON Atlas	1150	14,000
Noble Drlg	N-57	dsl	800	NATL 55	800	12,000
Penrod Drlg	104		2000	NATL 80B	1760	15,000
BURKE						
Bird Drlg	4	dsl	450	EMSCO GB350	700	9,000
Cardinal Drlg	5	dsl	541	EMSCO GB250	560	7,500
Grace-Bomac Drlg	21	dsl	650	IDECO H35SC	350	7,000
	27	dsl	1125	BRWSTR N55	800	9,500
	31	dsl	1325	BETH S45E	625	8,000
DIVIDE						
Brinkerhoff-Signal	5	dsl	1500	NATL 80	1500	15,000
Grace-Bomac Drlg	30	dsl	1650	OILWELL 96	1650	18,000
Kenting Drlg	1	dsl	1500	NATL 80B	1500	15,000
Westburne Drlg	62	dsl	1050	NATL 50A	1200	11,000
Westwind Drlg	59	dsl		NATL 80B	1800	15,000
DUNN						
Drilcon	2	dsl	1176	NATL 80B	1176	14,500
Dual Drlg	3	dsl	1500	WILSON 120	1650	15,000
	27	dsl	1900	EMSCO D3	1000	16,000
	17	dsl	1550	BETH M58	700	12,500
Grace-Bomac Drlg	92	dsl	1100	GAR-DEN 700M	1100	12,500
	52	dsl	1650	NATL 80B	1650	16,000
	41	dsl	700	BRWSTR N7	700	10,000
	53	dsl	1650	NATL 80B	1650	16,000
Helmerich & Payne Intl Drlg	38	dsl	1230	NATL 80	1365	16,000
Noble Drlg	OW-861	dsl	2400	OILWELL 860	2400	18,000
Ratliff Drlg	15	dsl	1650	NATL 80B	1650	18,000
Transcontinental Drlg-Denver	81	dsl	1000	GAR-DEN GC800	1470	15,000
Westburne Drlg	63	dsl	1000	OIME SL7	1400	15,000
	61	dsl	1050	NATL 55	1320	12,500
GOLDEN VALLEY						
Kenai Drlg Rocky Mountain	1	dsl	2450	EMSCO A800	2450	15,000
Noble Drlg	814	dsl	1606	NATL 80B	1606	15,000
McKENZIE						
Blocker Dirg-Houston	54					14,000
Blocker Drlg Canada	2	dsl	1000	OIME 1000SL	1500	16,000
	7	dsl	770	OIME 750SL	1155	14,000
	9	dsl	770	OIME 750SL	1155	14,000
	10	dsl	770	OIME SD3	770	10,000
	11	dsl	1000	NATL 80B	1500	15,000
	8	dsl	770	OIME 750SL	1155	14,000
	3	dsl	770	OIME 750SL	1155	14,000
	1	dsl	1000	OIME 1500SL	1500	18,000

NORTH DAKOTA (Cont'd)

Contractor	Rig No.	Type Power	Total HP All Main Mud Pumps	Drawworks Make and Model	Total HP Available to Drwwks	Rated Depth with 4½" Pipe
McKENZIE (Cont'd)						
Blocker Drlg-Houston	53					14,000
	52					16,000
	30					12,000
	51					18,000
Brinkerhoff-Signal	74	dsl	1500	GAR-DEN GD800	1500	15,000
	10	dsl	1000	M-CSCO U40	1000	13,000
	80	dsl	1500	NATL 80B	1500	16,000
Burris Drlg	102	dsl	1000	GAR-DEN 700	1000	14,500
	101	dsl	1500	GAR-DEN 1100M	1500	20,000
	103	dsl	1000	GAR-DEN 700	1000	14,500
Dixilyn-Field Drlg	35	dsl	1600	NATL 80UE	1800	15,000
Drilcon	4	dsl	1800	NATL 110	1800	15,000
Forwest	5	dsl-el-scr	2000	NATL 80UE	2000	16,000
Grace-Bomac Drlg	42	dsl	1100	GAR-DEN 700M	1100	12,500
	36	dsl	1650	NATL 80	1650	15,000
	25	dsl	1650	NATL 80B	1650	15,000
	58	dsl	1650	NATL 80B	1650	16,000
	54	dsl	1200	NATL 610	1200	12,500
	55	dsl	1650	GAR-DEN 800M	1650	16,000
	48	dsl	1650	GAR-DEN 800M	1650	16,000
	51	dsl	2400	NATL 110M	2400	20,000
	47	dsl	1650	NATL 80B	1650	16,000
	38	dsl	1100	GAR-DEN 700M	1100	12,500
	57	dsl	1650	GAR-DEN 800M	1650	16,000
	40	dsl	1100	OILWELL 76	1100	13,000
Helmerich & Payne Intl Drlg	15	dsl	1230	OILWELL 76	1365	15,000
Kenai Drlg Rocky Mountain	33	dsl	800	WILSON Giant	1000	12,000
Kenting Drlg	14	dsl	1500	NATL 80B	1500	15,000
	6	dsl	1500	BRWSTR N85	1500	15,000
	30-E	dsl-elec	2000	NATL 80UE	1000	15,000
Nicor Drlg	16	dsl	1550	OILWELL 76	1000	15,000
	27	dsl	1850	BRWSTR N95	1200	16,000
Noble Drlg	N-811	dsl	1606	NATL 80B	1606	15,000
	N-810	dsl	1606	NATL 80B	1606	15,000
Penrod Drlg	105	dsl	1575	NATL 80B	1760	15,000
	103	dsl	1760	NATL 80B	2000	20,000
Ratliff Drlg	6	dsl	1650	EMSCO GB800	1650	17,000
Republic Drlg & Serv	2	dsl-elec	1200	OILWELL 740E	1000	14,000
Shelby Drlg	52	dsl	1500	OIME SL7	1500	16,000
Tierra Drlg	14	dsl-elec	1000	BDW 800MX	750	14,000
True Drlg	23	dsl	1800	M-CSCO U712A	1800	16,000
	17	dsl	1350	NATL 50A	1000	12,000
	21	dsl	1800	NATL 80B	1800	15,000
TMBR Drlg	23	dsl	1100	NATL 75CA	1100	14,000
	22	dsl	700	BRWSTR N75	750	14,000
	16	dsl	700	NATL 50CA	600	10,500
	28	dsl	1650	GAR-DEN 800	1650	16,000
Westwind Drlg	56	dsl		NATL 80B	1800	15,000
MOUNTRAIL						
Bird Drlg	2	dsl	455	NATL 370	500	8,000
Blocker Drlg Canada	4	dsl	770	OIME 750SL	1155	14,000
Transcontinental Drlg-Denver	50	dsl	820	GAR-DEN GD800	1470	13,500
OLIVER						
Elenburg Expl	11	dsl	430	Elenburg 6000	430	6,000
RENVILLE						
Cardinal Drlg	6	dsl	560	EMSCO GB250	440	6,500
SHERIDAN						
Cardinal Drlg	35	dsl	560	SOS 6000S	460	7,500
STARK						
Anderson-Myers Drlg	6	dsl	1800	EMSCO GB800	1800	15,000
Cardinal Drlg	9	dsl	720	NATL 50CA	720	11,500
Cliffs Drlg	14	dsl	1200	EMSCO J1250	900	15,000
Enopco	4	dsl	1890	NATL 610	1080	13,000
Grace-Bomac Drlg	49	dsl	1650	GAR-DEN 800M	1650	16,000
	45	dsl	1650	GAR-DEN GD800	1650	16,000
Noble Drlg	N-84	dsl	1320	NATL 80B	1320	15,000
WILLIAMS						
Anderson-Myers Drlg	16	dsl	2300	NATL 55	1200	13,000
Brinkerhoff-Signal	77	dsl	1500	GAR-DEN 800M	1500	13,500
Challenger Drlg	22	dsl	1400	NATL 110	1800	18,000
Forwest	3	dsl-el-scr	2000	IDECO 1200E	1600	16,000
	4	dsl-el-scr	2000	IDECO 1200	1600	16,000
Grace-Bomac Drlg	60	dsl	1650	NATL 80B	1650	16,000
Kenai Drlg Rocky Mountain	12	dsl	850	NATL 50A	950	10,000
	27	dsl	1000	NATL CA75	1150	14,000
Nicor Drlg	25	dsl	1600	NATL 125	1200	15,000
	17	dsl	1400	OILWELL 76	1000	15,000
	40	dsl-elec	1700	OILWELL 660E	700	12,000
Noble Drlg	E551	dsl	800	EMSCO A550	800	13,000
	E552	dsl	800	EMSCO A550	800	13,000
Prust-Ram-Co	1	dsl-elec	2000	EMSCO D3	2000	18,000
	2	dsl	3000	EMSCO C1	3000	20,000
	5	dsl	1800	EMSCO D2	1200	14,000
	3	dsl	1800	EMSCO D2	1200	15,000
	4	dsl	2000	EMSCO D3	2000	18,000
Shelby Drlg	54-E	dsl-elec	1000	NATL 370ESCR	650	10,000
WILLISTON						
Rocky Mountain Drlg	4	dsl	1050	UNIT U36A	1050	10,000

OHIO

Contractor	Rig No.	Type Power	Total HP All Main Mud Pumps	Drawworks Make and Model	Total HP Available to Drwwks	Rated Depth with 4½" Pipe
HARDIN						
Sheldon & Son, R H	1	dsl	450	Wlkr-Nr 25040	350	6,000
HARRISON						
Mid Atlantic Oil	3	dsl				
HOCKING						
Beverly Drlg	2	dsl	3000	GAR-DEN	350	4,000
	1	dsl	2600	IDECO	600	6,000
Wilson Inc, Les	11	dsl	300	IDECO H35	300	5,000
	17	dsl	500	IDECO H37	550	6,000
NOBLE						
Mid Atlantic Oil	1	dsl	400	IDECO Rambler 5525	400	7,000
PERRY						
Mid Atlantic Oil	2	dsl		IDECO Rambler 5525	480	7,000
PORTAGE						
P E P Drlg	3	dsl	650	NATL T45	600	7,500
TRUMBULL						
Armstrong Drlg	11	dsl	380	CABOT/FRANKS	380	7,500
	27	dsl		WILSON Mogul 42	280	7,500
WASHINGTON						
Mutual of America	4	dsl	220	Waleneer R2	280	5,000
	2	dsl	145	Mayhew 3000	280	3,000
WAYNE						
Armstrong Drlg	12	dsl	380	MAYHEW 3000	318	4,000
	10	dsl	380	MAYHEW 3000 Port	350	4,000

OKLAHOMA

Contractor	Rig No.	Type Power	Total HP All Main Mud Pumps	Drawworks Make and Model	Total HP Available to Drwwks	Rated Depth with 4½" Pipe
UNDESIGNATED						
Austin & Sons, Jimmie		dsl	1000	BDW 800MI	900	15,000
		dsl	900	BRWSTR N75	900	14,000
		dsl	900	EMSCO 450	900	12,000
		dsl	900	M-CSCO U36	900	12,000
Austin Drlg		dsl	900	M-CSCO U3657	1000	12,000
		gas	700	BRWSTR N75	900	14,000
		gas	600	M-CSCO	700	11
Austin-Dunham		gas	1000	BRWSTR 75	1000	15,000
		gas	350	NATL 50	600	12,000
		dsl	850	BRWSTR N75	850	15,000
ACT Drlg	1	dsl	1750	GAR-DEN 6D 800	1000	16,000
	2	dsl	1750	NATL 125	1950	23,000
Dawn Oilfield Oper	26	dsl		IDECO H35		8,700
	25	dsl		WILSON 42		7,000
	27	dsl	550	IDECO H37		8,500
Durkee Drlg	10	dsl-el-scr	4000	IDECO E2100S	2000	25,000
	1	dsl-el-scr	2000	Dreco 1000UE	1000	16,000
	3	dsl-el-scr	4000	Dreco 2000UE	2000	25,000
	2	dsl-el-scr	2000	Dreco 1000UE	1000	18,000
	4	dsl-el-scr	4000	Dreco 2000UE	2000	25,000
Eason Oil	26	dsl-elec	3200	EMSCO C3E	3000	30,000
Iron Drlg	2	dsl	900	UNIT U15	600	9,000
	3	dsl	1050	BETH S45E	600	8,000
	1	dsl	500	UNIT U35A	450	7,000
Northeast Drlg	1	dsl	400	IDECO BIR3084	300	6,200
Parker Drlg	223	dsl	2000	OIME 1000C	1000	25,000
Quarles Drlg (OK)	5	dsl	850	NATL 50A	500	12,000
	4	gas	1400	EMSCO GB 500	500	12,000
	19	dsl	1800	OILWELL 96	1200	15,000
	16	dsl	2000	IDECO Super 711	1100	17,000
	10	dsl	2700	M-CSCO U914C	2400	22,000
Santa Fe Drlg	SFW-18	dsl-elec	1700	OILWELL E2000	2000	25,000
	SFDLI-20	dsl-elec	3400	OILWELL E2000	2000	25,000
	SFM 8	dsl	2700	OIME SD7E	900	20,000
	SFW-22	dsl-elec	2600	NATL 110UE	1500	17,000
	SFW-17	dsl-elec	1300	NATL 100	2000	14,000
	SFM 6	dsl	1200	OIME SL7	900	16,000
	SFDLII-21	dsl-elec	2600	NATL 110UE	1500	17,000
	SFM 4	dsl	1550	OIME SL1500	1500	18,000
	SFM 11	dsl	1900	GAR-DEN 800	1000	15,000
	SFM 12	dsl	2050	GAR-DEN 800	1000	15,000
	SFM 1	dsl	920	NATL 50A	450	11,000
	SFM 15	dsl	1450	BDW 800MI	800	15,000
	SFM 7	dsl	1200	OIME SD5	750	12,000
	SFW-19	dsl-elec	3400	OILWELL E2000	2000	25,000
	SFM 14	dsl	1450	BDW 800MI	800	15,000
	SFW-7	dsl-elec	2600	EMSCO C3111	3000	30,000
	SFM 5	dsl	1200	OIME SD5	750	12,000
	SFM 9	dsl	1600	BDW 800MX	800	16,000
	95	dsl-elec	2800	OILWELL E2000	1500	20,000
	SFW-15	dsl-elec	1600	EMSCO C111	2000	30,000
	SFM 2	dsl	1400	IDECO ED900	900	14,000
	SFM 3	dsl	1250	OIME 1000SL	900	14,000

OKLAHOMA (Cont'd)

Contractor	Rig No.	Type Power	Total HP All Main Mud Pumps	Drawworks Make and Model	Total HP Available to Drwwks	Rated Depth with 4½" Pipe
UNDESIGNATED (Cont'd)						
Santa Fe Drlg Mid-Continent	12M	dsl	1000	GAR-DEN 800M	1000	16,000
Smith & Stovall Drlg	9	dsl	1300	MESA 1500	1500	18,000
	7	dsl	1300	BRWSTR N95	2000	23,000
	10	dsl	1450	GAR-DEN 1100	2000	21,000
	8	dsl	1300	MESA 1500	1500	18,000
	5	dsl	1300	BRWSTR N12	2000	21,000
Titan Drlg	4	dsl	1200	GAR-DEN 1500E	1200	23,000
Triad Drlg	11	dsl	1650	WILSON 120	1650	20,000
Unit Drlg & Expl	15	dsl	1300	MCSCO 914C	1350	25,000
	25	dsl	600	GAR-DEN 700	1300	16,000
	18	dsl	1000	GAR-DEN 700	1300	16,000
	27	dsl	1600	GAR-DEN 1500	2400	25,000
	21	dsl	1000	GAR-DEN 700	1300	16,000
	26	gas	600	NATL 75	600	15,000
	22	gas	495	NATL 50	600	10,000
	16	dsl	600	UNIT U15	800	11,000
	8	dsl	1000	NATL 55	1588	15,000
Warren Interstate Drlg	1	dsl	1000	CABOT/FRANKS 2042TDHT	700	10,700
Westburne Drlg Canada	70	dsl	1050	NATL 50A	700	8,500
	67	dsl	1725	OILWELL 96	1725	20,000
	71	dsl	1560	OILWELL 860	1560	18,000
	68	dsl	1950	M-CSCO U1220D	1950	20,000
ALFALFA						
Thomas Drlg	2	dsl	300	NATL T32	300	7,300
	8	dsl	300	IDECO H35	300	7,500
ATOKA						
Butler-Johnson	11	dsl-elec	2000	NATL 110UE	2000	20,000
BEAVER						
Damac Drlg	3	dsl	620	WILSON Mogul	620	9,500
Drillers	23	dsl	600	UNIT U15	600	10,000
Hudson Drlg, Leonard	5	dsl	900	BRWSTR N7	900	11,500
Pilgrim Drlg	5	dsl	775	NATL 50CA	950	12,000
Robinson Bros Drlg	10	dsl	600	BRWSTR N46	600	19,000
Sage Drlg	6	dsl	400	EMSCO 350	400	8,500
Service Drlg (OK)	4	dsl	1000	UNIT RU15	800	10,000
Service Drlg (TX)	8	dsl	800	M-CSCO U15	630	7,000
Smart Drlg	3	dsl	820	M-CSCO Unit U15A	980	13,000
Triad Drlg	1	dsl		NATL T32	475	8,000
Unit Drlg & Expl	7	dsl	500	UNIT U15	800	11,000
	4	dsl	500	UNIT U15	800	11,000
Zenith Drlg	1	dsl	700	BRWSTR N75	700	9,500
BECKHAM						
Atco Drlg	61	dsl-elec	2600	EMSCO IIC	2000	20,000
Atco Drlg Southern	14	dsl-elec	3200	NATL 1320E	2000	22,000
Big Chief Drlg	45	dsl	1500	BRWSTR N95A	2250	18,000
	37	gas	1350	EMSCO J1250	1350	16,000
Blocker Drlg-Houston	46					20,000
	45					20,000
Cactus Drlg Co	3	dsl	1560	NATL 80B	1800	15,000
Challenger Drlg	7-E	dsl	900	NATL 80E	1000	14,000
Continental Drlg	9	dsl-elec	2000	IDECO ED1200	1200	16,000
	33	dsl-elec	2600	IDECO E1700	1700	19,000
	35	dsl-elec	2600	IDECO E1700	1700	19,000
Eason Oil	24	dsl-elec	2600	EMSCO C1E	1500	21,000
Grace/T R G Drlg	18	dsl-elec	2200	GAR-DEN 1500E	2400	22,000
	130	dsl-elec	2200	GAR-DEN 1100E	2400	18,000
	10	dsl-elec	3000	GAR-DEN 3000E	3000	30,000
Helmerich & Payne Intl Drlg	54	dsl	1100	OILWELL 76	1210	16,000
	97	dsl-scr	3400	OILWELL E2000	2000	26,000
	46	dsl	1100	EMSCO GB800	1210	15,000
Kelley & Kerr Drlg	KK-3	dsl-elec	2000	OIME SD7	1500	18,000
Lanex Drlg	B-18	dsl-scr	2700	GAR-DEN 1100E	1500	20,000
Loffland Bros	34	dsl-elec	3500	M-CSCO U1220	2500	28,000
	317	dsl	2250	GAR-DEN 1500	2500	24,000
Moran Bros	31	dsl-elec	2900	IDECO E2500	2500	25,000
	66	dsl	1300	BRWSTR N75A	750	15,000
	36	dsl-el-scr	2300	BRWSTR N12	1500	20,000
Nowotny & Conley Drlg	5	dsl-elec	3200	EMSCO C3 Type II	3000	30,000
Parker Drlg	212	dsl	3200	OIME 2000	2000	25,000
	182	dsl	3000	OIME Hercules 3000E	3000	30,000
	54	gas	1800	NATL 130	1800	25,000
	192	gas	1200	OIME 1000	1200	16,000
	201	dsl	4800	OIME E4000	4000	50,000
Penrod Drlg	129	dsl	1000	NATL 80B	1760	15,000
	126	dsl	1000	NATL 80B	1760	15,000
Quarles Drlg (OK)	3	dsl	2000	OIME 1000	1000	18,000
Ratliff Drlg	5	dsl	1100	NATL 75CS	1100	15,000
Robinson Bros Drlg	24	dsl-elec	3200	EMSCO Electra Hoist	2000	25,000
Rosamond Drlg	8	dsl	2325	NATL 130	2475	25,000
Rowan Drlg US	9	dsl-elec	2600	NATL 1625-DE	2000	25,000
	18	dsl	3200	EMSCO A1500	2500	30,000
Santa Fe Drlg Mid-Continent	14M	dsl	700	BDW 800	1000	14,000
Santa Fe Drlg Western	7	dsl-elec	2600	EMSCO C111	2700	30,000

OKLAHOMA (Cont'd)

Contractor	Rig No.	Type Power	Total HP All Main Mud Pumps	Drawworks Make and Model	Total HP Available to Drwwks	Rated Depth with 4½" Pipe
BECKHAM (Cont'd)						
Tierra Drlg	20	dsl-elec	800	BDW 800	800	14,000
	22	dsl-elec	800	BDW 800	800	14,000
	12	dsl-elec	750	BDW 800MX	1000	14,000
	21	dsl-elec	800	BDW 800	800	14,000
Trigg Drlg	7	dsl	1200	BRWSTR N95	1600	20,000
	8	dsl	1200	NATL 125	1600	20,000
	2	gas-btne	700	NATL 75	900	12,000
U R C Drlg	5	dsl	2250	M-CSCO 1220	2250	25,000
	4	dsl-elec	1500	M-CSCO 914C	1500	22,000
Unit Drlg & Expl	12	dsl-elec	1350	GAR-DEN 1500	2000	25,000
Viersen & Cochran Drlg	16	dsl	3200	NATL 1320UE	3417	25,000
Willbros Drlg	10	dsl-el-scr	3000	IDECO E1700	3000	25,000
BLAINE						
Bonray Drlg	22	dsl	800	IDECO H525	800	9,500
	8	dsl	850	COOPER 750	650	10,000
Hughes Drlg	3	dsl	1100	IDECO 725	900	13,000
Mercury Drlg	2	dsl	750	EMSCO Unit U15	940	12,000
Ratliff Drlg	12	dsl	700	GAR-DEN 500M	700	12,000
Trend Drlg	9	dsl	2000	BDW 800	1200	18,000
	5	dsl	1650	M-CSCO Unit U15CA	1200	11,000
Viersen & Cochran Drlg	2	dsl	600	NATL 55	800	12,000
	22	dsl	1245	NATL 610	1245	12,000
BRYAN						
Basin Drlg	5	dsl	600	EMSCO D2	820	13,000
Grace/T R G Drlg	1	dsl	1245	NATL 75	1305	13,500
Moran Drlg, E W	21	dsl	1600	WILSON 120	1100	15,000
CADDO						
Arden Drlg	12	dsl-elec	2600	NATL 110UE	1500	22,000
	3	dsl	2500	EMSCO C1	1500	20,000
Atco Drlg Southern	9	dsl-elec	3200	NATL 110	1500	18,000
	16	dsl-elec	3200	NATL 110UE	1500	18,000
Big Chief Drlg	44	dsl	2400	BRWSTR N95	2400	20,000
	46	dsl-el-scr	3000	EMSCO Electrohoist III	4200	25,000
	35	gas	2610	NATL 110	2610	20,000
	25	dsl	3000	NATL 110	2000	20,000
Brinkerhoff-Signal	15	dsl	2000	GAR-DEN 1500	2000	20,000
C E C Drlg	4	dsl	1400	GAR-DEN 500	800	12,000
Cactus Drlg Co	33	dsl	1560	NATL 110	1740	16,000
Challenger Drlg	71	dsl	4000	GAR-DEN 2100E	2000	22,000
Continental Drlg	34	dsl-elec	3200	IDECO E2100	2100	25,000
Dual Drlg	15	dsl	2600	WILSON 150A	1650	19,000
	32	dsl	2800	OILWELL 840	1500	22,000
	20	dsl	2800	OILWELL 860	1400	22,000
	33	dsl	2800	OILWELL 840	1500	22,000
Eason Oil	17	dsl	2300	EMSCO C1	1500	21,000
F-W Drlg	15	dsl	1000	IDECO H725	800	12,500
Grace/T R G Drlg	137	dsl-elec	2200	GAR-DEN 1500E	2400	22,000
	11	dsl-elec	2000	GAR-DEN 1100E	2400	18,000
	136	dsl-elec	2200	GAR-DEN 1500E	2400	22,000
	22	dsl	1290	NATL 80B	1305	14,500
Helmerich & Payne Intl Drlg	76	dsl	1650	OILWELL 760	1815	16,500
	96	dsl-scr	1600	NATL 80UE	800	15,000
Lagersen Drlg	7	dsl-elec	2000	EMSCO CIE	2500	22,000
Mercury Drlg	10	dsl	1000	GAR-DEN 800	2000	18,000
	7	dsl	1000	GAR-DEN 800M	2000	18,000
Moran Bros	33	dsl-el-scr	2300	NATL 110UE	1500	20,000
Moran Drlg, E W	22	dsl-elec	3200	EMSCO C3	3000	30,000
	25	dsl-elec	3200	GAR-DEN 3000E	3200	40,000
	10	dsl-elec	2600	GAR-DEN 1500	2000	25,000
Nicor Drlg	32	dsl-elec	2700	M-CSCO 1220EB	2000	25,000
	33	dsl-elec	2000	M-CSCO U914EC	1400	21,000
	11	dsl	2100	M-CSCO U1220B	2000	21,000
	9	dsl	2000	OIME 1500SL	1500	18,000
	35	dsl-elec	2000	M-CSCO U914EC	1400	21,000
	41	dsl	1000	GAR-DEN 1100M	1500	21,000
	69	dsl	2700	M-CSCO U1220EB	2000	25,000
	48	dsl	2700	M-CSCO U1220EB	2000	25,000
	6	dsl	1500	NATL 55	700	13,500
	10	dsl	2000	M-CSCO U914C	1400	18,000
Nicor Drlg Co	30	dsl	2000	M-CSCO U914C	1400	18,000
Noble Drlg	GD1	dsl	3135	GAR-DEN 1500	3135	22,000
Parker Drlg	164	dsl	1650	OIME SL1500P	1650	20,000
	204	dsl	2200	OIME E1500C	2200	22,000
	172	dsl	1650	OIME SL1500P	1650	20,000
	181	dsl	3000	OIME Hercules 3000E	3000	30,000
	213	dsl	2200	OIME SL1500	2200	22,000
	166	elec	3000	OIME 3000E	3000	30,000
Penrod Drlg	8	dsl	2600	NATL 1320M	3425	25,000
	133	dsl	1600	NATL 1625DE	4610	20,000
Pilgrim Drlg	3	dsl-elec	2500	IDECO Z100E	2500	25,000
Quarles Drlg (OK)	11	dsl	2700	M-CSCO U914C	2400	22,000
Resource Drlg	9	dsl	2330	NATL 110	2740	18,000
Rio Grande Drlg	9	dsl	1300	NATL 110M	2400	20,000

OKLAHOMA (Cont'd)

Contractor	Rig No.	Type Power	Total HP All Main Mud Pumps	Drawworks Make and Model	Total HP Available to Drwwks	Rated Depth with 4½" Pipe
CADDO (Cont'd)						
Robinson Bros Drig	Gary Jack	dsl-elec	2000	GAR-DEN	2000	18,000
	20	dsl	1000	BRWSTR N95	300	20,000
	9	dsl-elec	1700	IDECO 1200	2000	22,000
Sandia Drig	6	dsl	4000	EMSCO C3	4000	35,000
	5	dsl	2000	EMSCO D2	2000	16,000
Santa Fe Drig Mid-Continent	4M	dsl	1500	OIME SL 1500	1500	18,000
	11M	dsl	1000	GAR-DEN 800M	1000	16,000
Santa Fe Drig Western	20-W	dsl-elec	3400	OILWELL E2000	2000	25,000
Schlensker Drig	9	dsl	1500	OIME 1500SL	2205	18,000
	11	dsl	2400	GAR-DEN 1100M	2400	20,000
	2	gas	700	BETH MC450	900	12,000
Smart Drig	10	dsl	1000	M-CSCO U20	1500	18,000
Top Drig	7	dsl-elec	2000	OILWELL 760E	1000	20,000
Tri-Land Drig	1	dsl	1500	GAR-DEN 1500E	2000	21,000
Tri-Service Drig	7	dsl	2475	NATL 110M	2475	18,000
	9	dsl	2475	NATL 1320M	2475	22,000
	10	dsl	1800	OILWELL 860	1800	21,000
Trigg Drig	1	dsl	1500	GAR-DEN DW1500	1500	25,000
Unit Drig & Expl	28	dsl-elec	1600	GAR-DEN 1500E	2000	25,000
Viersen & Cochran Drig	15	dsl	1010	OILWELL 660	830	13,000
	6	dsl	2000	BETH 1013	2400	25,000
Westburne Drig	71	dsl	1560	OILWELL 860	1560	16,000
	68	dsl	1600	UNIT U1220	1875	20,000
	64	dsl	1680	UNIT 914C	1680	18,000
	66	dsl	1200	GAR-DEN 1100E	1500	18,000
CANADIAN						
ACT Drig	3	dsl	800	WILSON 42	700	10,000
Basin Drig	6	dsl	600	BRWSTR N7	820	10,000
Blocker Drig-Houston	26					14,000
Bodard & Hale Drig	9	dsl	550	BETH S55	700	9,000
Bonray Drig	5	gas	700	NATL 50A	700	9,000
	6	dsl	700	NATL 50A	700	9,000
Buck Oil & Gas Corp, Rick	3	dsl	1000	BDW 800	1000	15,000
Cothrum Drig	6	dsl	750	EMSCO G500	600	7,500
	1	dsl	774	EMSCO 350	636	9,500
FWA Drig	9	dsl	1150	WILSON Giant	720	11,500
Kelley & Kerr Drig	KK-2	dsl-elec	2000	OIME SD7	1500	18,000
Magic Circle Drig	11	dsl	900	NATL 50A	900	10,000
Nicor Drig	7	dsl	1020	M-CSCO U15	700	11,500
Robinson Bros Drig	5	dsl	1000	OILWELL 66	900	11,000
Smart Drig	6	dsl	875	UNIT U15	950	13,500
	2	dsl-elec	1410	M-CSCO Unit 36	1000	14,000
Thomas Drig	1	dsl		BRWSTR N42		11,000
Trend Drig	4	dsl	1320	M-CSCO Unit U36A	1060	12,000
U R C Drig	3	dsl	880	UNIT U36A	860	12,500
Warrior Drig	5	dsl	2000	BDW	1200	15,000
CARTER						
Arbuckle Drig	1	dsl	450	BDW 450T	600	9,000
Arden Drig	4	dsl	1800	EMSCO D2	1000	16,000
Ardmore Drig	5			IDECO		16,500
	3	gas	1350	IDECO M10000	1350	12,500
	4	gas	600	WILSON	400	500
	1	dsl	450	IDECO H30-D	450	5,000
	2	gas	700	WILSON GIANT	700	9,000
Big Chief Drig	30	gas	1515	IDECO 1050	1515	15,000
	12	gas	1600	NATL 80B	1600	14,000
Cliffs Drig	42	dsl-elec	2600	NATL 1320UE	3025	25,000
Compadre Drig & Expl	1	dsl	360	Wlkr-Nr A25040	360	6,000
Guffey-Schlensker Drig	2	dsl	600	BRWSTR N45	700	8,000
Jones Drig Corp	16	dsl	600		600	8,000
	9	gas	816		800	14,000
	8	gas	700		700	12,000
Kingery Drig	10	gas	300	WILSON Giant	300	5,000
Little-Deutag	T-12	dsl	1300	IDECO H525D	670	8,000
	T-11	dsl	1700	NATL 80B	1000	15,400
Parker Drig	215	gas	2200	OIME SL1500	2200	22,000
Pilgrim Drig	1	dsl	750	IDECO H35	600	12,000
	2	dsl	1500	OILWELL 76	1500	16,000
Roberson Drig	3	gas	700	UNIT U15	600	10,000
	1	gas	600	EMSCO	400	7,000
CHICKASHA						
Santa Fe Drig Mid-Continent	18M	dsl	1100	OILWELL 96	3000	18,000
CIMARRON						
Sunflower Drig	S-8	dsl	500	BRWSTR N42	600	7,500
CLEVELAND						
Astro Drig	21	dsl	2500	NATL 100	1500	18,000
	18	dsl	556	IDECO H1000	840	12,000
Baltic Drig	10	dsl	940	SUPERIOR 700	600	9,500
Bighorn Drig	5	dsl	1200	UNIT U15	1000	10,000
Johnson Bales Drig	9	dsl	700	BETH S50	450	7,500
Magic Circle Drig	15	dsl	900	UNIT U15	900	12,000
Quarles Drig (OK)	7	dsl	1050	NATL 750A	800	14,000
Ratliff Drig	11	dsl	850	BRWSTR N7	850	10,000
Santa Fe Drig Mid-Continent	1M	dsl	800	NATL 50A	800	12,000
Smart Drig	9	dsl	820	M-CSCO U15	980	13,000

OKLAHOMA (Cont'd)

Contractor	Rig No.	Type Power	Total HP All Main Mud Pumps	Drawworks Make and Model	Total HP Available to Drwwks	Rated Depth with 4½" Pipe
COAL						
Smith Bros Drig	3	dsl	850	K&L 950	900	14,000
Winter Drig & Expl	4	dsl				
COMANCHE						
Arrowhead Drig	C-3	dsl	1040	NATL 610	1040	12,000
Big Chief Drig	47	dsl-el-scr	4000	GAR-DEN 3000E	3000	35,000
Bonray Drig	9	dsl-elec	3000	OILWELL E2000	2000	25,000
Cliffs Drig	43	dsl-elec	2600	NATL 1320UE	3300	25,000
Continental Drig	4	dsl-elec	3200	IDECO E2100	2000	25,000
	7	dsl-elec	3200	IDECO E3000	3000	30,000
	13	dsl-elec	2000	IDECO ED1200	1200	16,000
Drillers	48	dsl-elec	3600	IDECO E3000	3000	30,000
Eagle Prod & Drig Serv	6	dsl-elec	2000	OILWELL E2000	2000	25,000
	3	dsl-elec	2000	OILWELL E2000	2000	25,000
	7	dsl-elec	2000	OILWELL E2000	2000	25,000
Eason Oil	23	dsl-elec	3200	EMSCO C3E	3000	30,000
Eltex Drig Contractors	304	dsl-elec	1600	NATL 1320UE	2000	25,000
	303	dsl-elec	1600	NATL 1320UE	2000	25,000
Forex Neptune and/or Affil	51	dsl-elec	3200	GAR-DEN 1500E	2000	21,700
Grace/T R G Drig	135	dsl-elec	2200	GAR-DEN 1500E	2400	22,000
Henley Drig	4	dsl-elec	2600	EMSCO C2	2000	25,000
JFP Well Serv	8	dsl	2000	OILWELL E2000	2000	25,000
Loffland Bros	18	dsl-elec	2600	M-CSCO U1220EB	2200	28,000
	200	dsl-elec	3300	EMSCO 3000 Type 2	3300	50,000
	19	dsl-elec	3200	EMSCO C3000	3300	35,000
Mercury Drig	5	dsl	1350	GAR-DEN 1100	2775	22,000
Moran Drig, E W	27	dsl-elec	3200	GAR-DEN 1500E	2000	25,000
Murco Drig	42	dsl-el-scr	2800	OILWELL E2000	2000	25,000
Navajo Drig	12	dsl	1000	UNIT U1220	2000	25,000
	10	dsl	1000	UNIT 914	2000	20,000
Nicor Drig	42	dsl-elec	2000	UNIT U914EC	1400	21,000
	47	dsl	2600	EMSCO C3E	2000	25,000
	45	dsl-elec	2700	UNIT U1220EB	2000	25,000
	29	dsl-elec	2700	GAR-DEN E1500	2000	25,000
	70	dsl	2700	GAR-DEN 1500E	2000	25,000
	49	dsl-elec	3200	GAR-DEN 1500E	2000	25,000
Noble Drig	N-133	elec	3300	NATL 1320UE	1320	2 25,000
Parker Drig	193	dsl	3200	OIME 3000E	4000	35,000
	203	dsl	2800	OIME E2000	2000	25,000
	114	dsl-elec	2700	IDECO 3000E	3000	30,000
Penrick Drig	102	dsl-elec	3200	UNIT 1220	2000	30,000
Penrod Drig	3	dsl	2600	NATL 1320M	3425	25,000
	127	dsl	1000	NATL 80B	1760	15,000
	118	dsl	1800	NATL 1625M	3000	30,000
	21	dsl	2600	NATL 1320M	1950	15,000
Ratliff Drig	1	dsl	2640	OILWELL 96	2640	24,000
	20	dsl	3600	UIZZOEB	2500	30,000
Resource Drig	C-3	dsl	1040	NATL 6[illegible]0	1220	12,000
Robinson Bros Drig	23	dsl-elec	3200	EMSCO C2	2000	26,000
	3	dsl	3105	NATL 1320	3740	25,000
Sandia Drig	4	dsl	4000	EMSCO C1	4000	22,000
CREEK						
Equity Drig	175	dsl	300	WILSON Super 38	300	4,200
Mar-Tay Drig	1	dsl	450	Crwdll K200C	350	5,000
McLennan Drig	5	dsl	450	CABOT/FRANKS 658	318	4,000
Whitehead Drig Contr	1	dsl	450	WILSON Model 30	425	4,000
CUSTER						
Bates-Great Western Energy	6	dsl	1560	M-CSCO U20	1040	16,000
Bonray Drig	30	dsl	2400	NATL 1320	2400	25,000
	20	dsl	1680	IDECO Super 711	1680	17,000
	1	dsl	1230	OILWELL 760	1230	16,000
	32	dsl	1600	NATL 110	1600	20,000
	21	dsl	990	IDECO H750	660	12,000
	31	dsl	2400	NATL 1320	2400	25,000
	2	dsl	1650	OILWELL 860	1650	20,000
Brinkerhoff-Signal	86	dsl	4000	NATL 110UE	2000	20,000
Continental Drig	15	dsl-elec	2000	IDECO ED1200	1200	16,000
	8	dsl-elec	2600	IDECO E1700	1700	19,000
	16	dsl-elec	2000	IDECO ED1200	1200	16,000
	12	dsl-elec	2000	IDECO ED1200	1200	16,000
	32	dsl-elec	2600	IDECO E1700	1700	19,000
Drillers	42	dsl-elec	3000	EMSCO Electrohoist	3000	25,000
	24	dsl	900	BRWSTR N55	900	11,000
	30	dsl	800	UNIT U15M	1000	11,000
	39	dsl-elec	1200	IDECO 700E	1000	14,000
Eason Oil	12	dsl	2000	NATL 80B	1200	16,000
	18	dsl-elec	2300	EMSCO C1E	1500	21,000
FWA Drig	34	dsl	2200	OILWELL 760	1560	15,000
Grace/T R G Drig	12	dsl-elec	1500	GAR-DEN 800E	1800	15,000
	17	dsl-elec	2200	GAR-DEN 1500E	2400	22,000
	16	dsl-elec	1500	GAR-DEN 1100E	1800	15,000
	5	dsl	1400	NATL 75	1305	13,000
Harper-Turner Drig	10	dsl	2000	NATL 80B	1500	16,000
Helmerich & Payne Intl Drig	85	scr	1700	OILWELL 760E	760	16,000
	49	dsl	1650	NATL 110	1815	18,000
	93	dsl	1600	NATL 80B	800	15,000
	94	dsl-scr	2000	NATL 110ME	1300	20,000

OKLAHOMA (Cont'd)

Contractor	Rig No.	Type Power	Total HP All Main Mud Pumps	Drawworks Make and Model	Total HP Available to Drwwks	Rated Depth with 4½" Pipe
CUSTER (Cont'd)						
Lanex Drlg	B-20	dsl-scr	2600	EMSCO EHII	2000	20,000
	B-16	dsl-scr	2000	GAR-DEN 800E	1000	16,000
	A-15	dsl-scr	2000	EMSCO D3	1000	16,000
	B-15	dsl-scr	2000	EMSCO D3	1000	16,000
Loffland Bros	32	dsl-elec	4000	EMSCO CE3000	3300	35,000
	244	dsl-elec	2500	M-CSCO U1220E	2200	28,000
	196	dsl-elec	3300	M-CSCO U1220	2200	28,000
	20	dsl-elec	3200	EMSCO C3000	3000	35,000
Matagorda Marine Drlg	19		1750	M-CSCO U712A	1995	16,000
Moran Bros	68	dsl-el-scr	3200	EMSCO C2 Type II	2000	25,000
	35	dsl-elec	1700	OILWELL 76	1000	15,000
	37	dsl	1000	NATL 610	750	12,000
	4	dsl-el-scr	1500	EMSCO A800E	1000	15,000
Moran Drlg, E W	2	dsl	1500	GAR-DEN 700	800	15,000
	11	dsl	2600	WILSON 150A	1650	20,000
Nicor Drlg	1	dsl	1500	M-CSCO U20	1200	15,000
	56	dsl-elec	2700	UNIT U1220EB	2000	25,000
	34	dsl-elec	2000	M-CSCO U914EC	1400	21,000
	63	dsl	2650	OILWELL 96	1500	18,000
	64	dsl-mech	1700	EMSCO GB800	1000	15,000
Noble Drlg	N-83	dsl	1530	NATL 80B	1530	15,000
	OW-841	elec	2775	OILWELL 840E	1400	20,000
Parker Drlg	210	dsl	2200	OIME 15006	2200	22,000
	205	dsl	2200	OIME 1500C	2200	22,000
	208	gas	2200	IDECO 711	2200	18,000
	214	gas	2200	OIME 1500-C	2200	22,000
Quarles Drlg (OK)	9	dsl	2000	OIME SD 7E	1000	22,000
	14	dsl	2700	M-CSCO U914C	2400	22,000
	8	dsl	2000	OIME SD 7E	1000	22,000
Resource Drlg	RD-27	dsl	1560	NATL 80B	1835	14,000
	7	dsl	1560	NATL 80B	1835	14,000
Rine Drlg	9	dsl	1000	GAR-DEN 800	1000	13,500
Santa Fe Drlg Mid-Continent	15M	dsl	750	BDW 800	1000	14,000
Santa Fe Drlg Western	17-W	dsl	1300	NATL 110	1500	16,000
Schlensker Drlg	10	gas	900	GAR-DEN 800M	1350	16,000
Slawson Drlg	9	dsl	1400	IDECO H900	950	14,000
Smart Drlg	8	dsl	835	BRWSTR N55	950	13,500
Spartan Drlg	8	dsl-elec	1100	Superior 1000UE	1000	16,000
Top Drlg	4	dsl	1200	OILWELL 660	1200	14,000
Tri-Service Drlg	12	dsl-el-scr	3300	OILWELL E2000	2000	25,000
Warrior Drlg	2	dsl	1600	BRWSTR 75	1200	15,000
Westburne Drlg	67	dsl	1725	OILWELL 96	1725	19,000
Wilson Bros Drlg	14	dsl	2600	NATL 110	2700	20,000
	18	dsl	1300	NATL 110	3300	20,000
	15	dsl	2600	NATL 110	2700	20,000
	1	dsl-elec	2600	IDECO E2100	2100	21,000
Zenith Drlg	9	dsl	1200	GAR-DEN 800	1200	17,000
DEWEY						
Beard Drlg (OK)	5	dsl	1379	EMSCO D2	1029	15,000
	3	dsl	1379	UNIT U10	1029	14,000
Cothrum Drlg	5	dsl	1525	BDW 650	912	14,000
Drillers	27	dsl	700	EMSCO GB500	750	10,000
Fossil Drlg	4	dsl	1300	UNIT U15	900	14,000
FWA Drlg	21	dsl	1000	WILSON Mogul 42	720	10,000
Harper-Turner Drlg	2	dsl	800	NATL 50	820	10,500
	4	dsl	600	NATL 50	820	9,000
	11	dsl	2000	NATL 110	1500	20,000
Helmerich & Payne Intl Drlg	55	dsl	1100	NATL 55	1210	14,000
	95	dsl-scr	1800	NATL 80UE	800	15,000
	84	dsl-scr	1700	OILWELL 760E	760	16,000
Hickman Drlg	3	dsl	1200	BDW 650	800	12,000
Loffland Bros	73	dsl-elec	2160	M-CSCO U712A	2200	18,000
Matagorda Marine Drlg	17		750	M-CSCO U712A	1995	16,000
Mercury Drlg	6	dsl	1000	EMSCO 500	1470	14,000
Nicor Drlg	2	dsl	1300	M-CSCO U15	700	12,000
	28	dsl	700	UNIT U15	700	11,500
	5	dsl	1000	BETH C50	450	10,000
	14	dsl	625	GAR-DEN 500M	650	10,000
	12	dsl	1050	GAR-DEN 700M	800	13,000
Pulliam Drlg	12	dsl	1600	NATL 50A	1200	11,000
Robinson Bros Drlg	GBL	dsl	1250	IDECO 1200	1000	12,000
Sage Drlg	8	dsl	900	BDW 650	800	12,000
Seneca Drlg	3	dsl-elec	800	UNIT U36EA	800	14,000
Top Drlg	3	dsl	400	OILWELL 500	450	8,500
	1	dsl	650	BRWSTR N7	900	10,000
	5	dsl	1000	M-CSCO U15	1000	10,000
Triad Drlg	10	dsl		GAR-DEN 700	1100	15,000
	9	dsl		BDW 650	800	12,000
Unit Drlg & Expl	9	dsl	600	BRWSTR N55	1050	12,000
	24	dsl	600	GAR-DEN 800	1200	15,000
Viersen & Cochran Drlg	20	dsl	1245	NATL 610	1245	13,000
	17	dsl	600	OILWELL 660	830	12,000
	12	gas	500	NATL 50	800	9,000
ELLIS						
Dean Drlg	1	dsl	1100	IDECO H40	1000	11,000
Eagle Drlg	2	dsl	1000	NATL T45	725	9,500
	3	dsl	1100	BDW 800	1500	14,000
Forex Neptune and/or Affil	48	dsl-elec	3200	GAR-DEN 1100E	1500	18,000
Helmerich & Payne Intl Drlg	8	dsl	1100	NATL 55	1210	14,000
Hickman Drlg	5	dsl	1450	BDW 800	1100	15,000
	2	dsl	1150	BDW 650	800	12,000
ELLIS (Cont'd)						
Murco Drlg	30	dsl	2800	OILWELL N200B	3000	25,000
Rine Drlg	5	dsl	700	BRWSTR N55	700	9,000
	4	gas	750	BRWSTR N75	750	12,000
Robinson Bros Drlg	21	dsl	1500	BDW 650M	1300	14,000
	14	dsl	900	NATL 50	800	11,000
Triad Drlg	5	dsl		IDECO Super 750	1100	14,000
Unit Drlg & Expl	1	dsl	500	UNIT U15	800	11,000
Zenith Drlg	5	dsl	1100	BDW 800	1100	16,000
FIELD						
Top Drlg	2	dsl	1200	OILWELL 660	1200	14,000
GARFIELD						
Astro Drlg	20	dsl	550	CABOT/FRANKS 550	456	8,500
	15	dsl	912	SUPER WILSON GI	912	10,500
Hughes Drlg	8	dsl	550	IDECO H35	400	6,250
	5	dsl	550	IDECO H35	400	6,250
	1	dsl	550	IDECO H35	475	8,000
	2	dsl	550	IDECO H35	475	8,000
H30 Drlg	77	dsl	525	IDECO H40	600	8,000
Sabre Drlg Div TRG Drlg	8	dsl	1050	M-CSCO U15	1050	9,000
Thomas Drlg	5	dsl	425	WILSON Giant	400	8,900
Trend Drlg	8	dsl	600	IDECO H44	1100	10,000
Unit Drlg & Expl	23	dsl	600	UNIT U15	600	10,000
GARVIN						
Big Chief Drlg	41	gas	1400	BRWSTR N75	900	12,000
	20	gas	1200	M-CSCO U40	960	13,500
	22	gas	1600	NATL 80B	1600	14,000
Blocker Drlg-Houston	20					9,000
Bodard & Hale Drlg	10	dsl	450	OILWELL 52T	600	9,000
Fossil Drlg	1	dsl	1150	EMSCO GB350	800	10,000
Grace/T R G Drlg	3	dsl	995	GAR-DEN 700M	1305	10,500
Leeman Drlg	1	dsl	500	Cooper 550	525	8,000
Little-Deutag	T-2	dsl	1300	IDECO H525D	670	8,000
Resource Drlg	RD-29	dsl	1560	NATL 80B	1835	14,000
	RD-28	dsl	1040	NATL 610	1220	12,000
Westburne Drlg	70	dsl	700	NATL 50A	700	10,000
GRADY						
Arden Drlg	6	dsl-elec	3200	EMSCO C3	3000	35,000
	8	dsl	3400	EMSCO CE3000	3000	30,000
	2	dsl	800	EMSCO WS1	800	12,000
Beard Drlg (OK)	2	gas	1200	UNIT U15	800	12,000
Big Chief Drlg	36	dsl	1400	NATL 55	900	11,000
	43	dsl	2000	NATL 80B	2250	16,000
	11	dsl	1350	BRWSTR N75	1350	13,000
Cactus Drlg Co	35	dsl-elec	3220	NATL 110UE	3220	20,000
	6	dsl	1040	IDECO 711	1200	14,000
Challenger Drlg	72	dsl	4000	GAR-DEN 3000E	3000	30,000
	23	dsl	1800	GAR-DEN 11100	2700	18,000
Continental Drlg	10	dsl-elec	3200	IDECO E2100	2000	25,000
Crescent Drlg	1	dsl	400	BETH S45E	400	7,000
Dual Drlg	4	dsl	2400	NATL 110	1500	19,000
Exxon Oil	22	dsl-elec	2000	EMSCO C1E	1500	21,000
	19	dsl	1800	EMSCO D2	750	13,000
Forex Neptune and/or Affil	45	dsl-elec	3200	GAR-DEN 1500E	2000	21,700
FWA Drlg	19	dsl	1600	WILSON Titan	1040	14,000
Grace/T R G Drlg	14	dsl-elec	2000	GAR-DEN 1100E	2400	13,000
GRACE/T R G Drlg	75	dsl-elec	2200	NATL 1320UE	2400	22,000
Highbridge Drlg	35	dsl	1850	BDW 800	1200	15,000
Loffland Bros	111	dsl-elec	3300	EMSCO A1500	2200	24,000
	99	gas	1300	M-CSCO U20	1300	15,000
	206	gas-elec	2160	M-CSCO U914B	2200	20,000
M G F Drlg-Lafayette	46	dsl	1800	IDECO S711	1500	18,000
Magic Circle Drlg	12	dsl	900	NATL 50A	900	12,000
	16	gas	1300	BETH M810	1300	16,000
Mercury Drlg	12	dsl	1000	GAR-DEN 800	2010	20,000
	8	dsl	1000	GAR-DEN M700	1470	17,000
	3	dsl	1000	OILWELL 96	2010	22,000
Navajo Drlg	17	dsl	1000	UNIT U914	2000	20,000
	11	dsl	1000	UNIT U914	2000	20,000
Noble Drlg	N-114	dsl	2090	NATL 110	2090	18,000
	OW-23	elec	3750	OILWELL E2000	2000	25,000
Parker Drlg	196	dsl	3200	OIME E3000	4000	35,000
	179	dsl	3000	OIME Hercules 3000E	3000	30,000
	217	gas	3200	OIME E2000	2000	25,000
	186	dsl	2200	OIME 1500	2200	22,000
Pilgrim Drlg	4	dsl-elec	2000	OILWELL 840EHD	2000	22,000
Ratliff Drlg	17	dsl	700	NATL 50A	700	12,000
	14	dsl	2640	M-CSCO U1220B	2640	28,000
Sandia Drlg	2	dsl	4000	EMSCO C1	4000	22,000
Santa Fe Drlg Mid-Continent	6M	dsl	1000	OIME S/L 7	1500	16,000
	9M	dsl	600	BDW-800MX	1500	16,000
Santa Fe Drlg Western	19-W	dsl	2000	OILWELL E2000	2000	25,000
	18-W	dsl	3200	OILWELL E2000	2000	25,000
Thomas Drlg	6	gas	600	NATL 50A	600	13,000
U R C Drlg	6	dsl	1600	IDECO BIR7585		10,500
Unit Drlg & Expl	20	dsl	1000	GAR-DEN 700	1300	16,000
	10	dsl	1000	BETH M58	1330	15,500
Viersen & Cochran Drlg	18	dsl	1000	NATL		
	4	dsl	600	NATL 55	800	12,000
	10	dsl	2000	NATL 100	1040	17,000
Warrior Drlg	3	dsl	1800	NATL 100	1800	17,000

OKLAHOMA (Cont'd)

Contractor	Rig No	Type Power	Total HP All Main Mud Pumps	Drawworks Make and Model	Total HP Available to Drwwks	Rated Depth with 4½" Pipe
GRANT						
Mendenhall Drlg	1	dsl	350	Failing 90	318	5,000
Top Drlg	6	dsl	350	NATL T32	350	7,500
Trend Drlg	2	dsl	500	IDECO H35	525	7,500
	7	dsl	600	IDECO H44	800	8,500
Vaughn Good Drlg	3	dsl	500	Cooper 600	500	9,000
	1	dsl	500	Cooper 600	500	9,000
HARPER						
Beredco	1	dsl	800	M-CSCO U15	800	9,000
Challenger Drlg	3	dsl	700	NATL 50A	750	10,000
Rine Drlg	7	dsl	750	GAR-DEN 700	750	13,500
Sage Drlg	4	dsl	800	M-CSCO U15	800	11,000
Triad Drlg	2	dsl		BRWSTR N45	550	9,000
HASKELL						
Cactus Drlg Co	51	dsl	800	BRWSTR N55	1000	9,000
Miller Drlg	11	dsl	350	Spencer 5000	300	6,000
Moran Drlg, E W	16	dsl	920	Spencer 7000	450	9,500
HUGHES						
Gold Star Drlg	1	dsl	450	IDECO H37ED	450	6,500
Johnson Bates Drlg	1	gas	350	M-CSCO U34	300	5,700
R W I T Drlg	2	gas-LPG	600	M-CSCO U34	260	6,000
Rockwell Drlg	18	dsl	670	UNIT U34	450	5,000
	24	dsl	450	Mac-300	450	5,000
	22	dsl	670	EMSCO G36	450	7,000
	20	dsl	670	MAC 350	550	6,500
Scott Drlg, Jerry	6	dsl	1342	EMSCO Unit U15	1342	10,500
Sloan Drlg	16	dsl	400	WILSON 42	600	7,000
JACKSON						
Bearden Drlg, Jack E	5	dsl	1200	WILSON 75	900	9,500
JEFFERSON						
Nicor Drlg	8	dsl	755	NATL 50CA	425	11,000
Noble Drlg	N-87	dsl	1200	NATL 80B	1200	15,000
Ratliff Drlg	7	gas-btne	1020	NATL 75CB	1020	15,000
KAY						
Hughes Drlg	10	dsl	550	CABOT/FRANKS 550	475	8,000
Kay Drlg	1	dsl	480	BRWSTR N4	480	6,000
McLennan Drlg	3	dsl	450	CABOT/FRANKS Model 658	318	4,500
KINGFISHER						
Beard Drlg (OK)	1	gas	675	EMSCO G450	450	10,000
Bighorn Drlg	4	dsl	1000	UNIT U15	1000	10,000
Cactus Drlg Co	56	dsl	800	BRWSTR N55	1000	9,000
Eason Oil	20	dsl-elec	2000	EMSCO D3	1000	16,000
Plotner Drlg	1	dsl	900	GAR-DEN 500	900	12,000
Sabre Drlg Div TRG Drlg	4	dsl	600	NATL 370	525	7,500
Santa Fe Drlg Mid-Continent	5M	dsl	600	OIME SD-5	784	12,000
Smart Drlg	1	dsl-mech	900	M-CSCO Unit U15	950	13,000
Smith Bros Drlg	5	dsl	600	WILSON 42	800	11,000
Trend Drlg	6	dsl	1500	IDECO 725	1200	12,000
KIOWA						
Moran Drlg, E W	30	dsl-elec	3200	GAR-DEN 1500E	2000	25,000
LATIMER						
Dual Drlg	10	dsl	1500	WILSON 120	1100	15,000
	18	dsl	1850	BETH M-810	1100	15,000
Miller Drlg	109	dsl	1000	BDW 800		15,000
	8	gas	450	M-CSCO U15	450	8,000
	122	dsl		BDW 800		15,000
Unit Drlg & Expl	17	dsl	700	BRWSTR N75	1300	15,000
LE FLORE						
Alexander Drlg	1	dsl	800	M-CSCO U34	500	6,500
Dual Drlg	2	dsl	950	WILSON Giant	850	9,500
New Prospect Drlg	2	dsl	1000	BRWSTR N75	1100	16,000
Unit Drlg & Expl	29	dsl	1000	BRWSTR N75	1200	16,000
LINCOLN						
Bodard & Hale Drlg	12	dsl	450	MAC 400	525	7,500
R W I T Drlg	9	gas-LPG	610	WILSON	280	6,000
Sabre Drlg Div TRG Drlg	7	dsl	600	M-CSCO U15	450	7,500
Venture Drlg	1	dsl	550	CABOT/FRANKS 750	750	7,500
LOGAN						
Basin Drlg	14	dsl	1470	GAR-DEN 700	1220	14,000
	7	dsl	600	BRWSTR N45	820	8,000
	10	dsl	600	GAR-DEN 500	820	10,000
	2	dsl	600	GAR-DEN 500M	820	10,000
	9	dsl	600	GAR-DEN 500	820	10,000
	6	dsl	750	EMSCO D2	820	13,000

OKLAHOMA (Cont'd)

Contractor	Rig No.	Type Power	Total HP All Main Mud Pumps	Drawworks Make and Model	Total HP Available to Drwwks	Rated Depth with 4½" Pipe
LOGAN (Cont'd)						
Bighorn Drlg	3	dsl	800	IDECO H37	500	6,500
Buck Oil & Gas Corp, Rick	4	dsl	400	GAR-DEN 3000	400	7,000
Cactus Drlg Co	57	dsl	520	IDECO H35	454	6,500
Harper-Turner Drlg	12	dsl	600	Cooper	700	9,000
Hughes Drlg	4	dsl	600	IDECO H44	700	9,000
Porter Drlg, Gene	1	dsl	600	M-CSCO U34	435	6,000
Sabre Drlg Div TRG Drlg	9	dsl	450	M-CSCO U34	450	6,000
Scott Drlg, Jerry	5	dsl	375	BETH S45	375	6,000
Sloan Drlg	26	dsl		Dugan Machine DS5	265	8,500
Sumpter & Barker Drlg	1	dsl	930	WILSON Mogul 42 Trlr Mtd	430	6,500
LOVE						
Big Chief Drlg	42	dsl	1800	NATL 80	1800	15,000
Fossil Drlg	2	dsl	1350	GAR-DEN 500M	900	12,000
Jones Drlg Corp	7	gas	700		750	12,000
Little-Deutag	T-35	dsl	1600	Cooper LTO750	750	10,000
Moran Drlg, E W	8	dsl	2200	WILSON 150A	1650	15,000
Ratliff Drlg	9	gas	700	NATL 50A	1020	11,000
Santa Fe Drlg Mid-Continent	3M	dsl	1100	OIME SL 1000	1100	14,000
	7M	dsl	600	OIME SD-5	784	12,000
McCLAIN						
Beard Drlg (OK)	4	dsl	1379	UNIT U10	1029	14,000
Blocker Drlg-Houston	25					12,000
Bodard & Hale Drlg	7	dsl	550	BETH S55	600	8,000
Bonray Drlg	4	dsl	900	UNIT U40	900	14,000
Cothrum Drlg	2	dsl	926	M-CSCO U15A	912	11,500
Moran Drlg, E W	20	dsl	1200	Spencer 7000	450	9,500
Ratliff Drlg	2	gas	1020	NATL 55	1020	14,000
Robinson Bros Drlg	4	dsl	1000	NATL 50	800	11,000
Sharp Drlg	38	dsl	790	BETH M58	988	12,000
Smart Drlg	4	dsl	1230	OILWELL 76	1470	16,000
Trigg Drlg	4	dsl	700	NATL 75	950	12,000
	5	gas-btne	500	NATL 50A	800	10,000
MAJOR						
Cimarron Oper	1	dsl	750	IDECO BIR5525	450	6,500
	2	dsl	1230	IDECO H725	950	10,000
	3	dsl	1230	IDECO H725	950	10,000
	4	dsl	920	IDECO BIR5525	450	6,500
	5	dsl	1230	IDECO DIR7015	608	8,500
Logan Drlg	4	dsl	1200	BDW 650	900	10,000
Robinson Bros Drlg	11	dsl	600	BRWSTR N45	500	10,000
Thomas Drlg	9	dsl	640	BRWSTR N46	840	13,000
	4	dsl	600	EMSCO 500	600	10,200
Trend Drlg	3	dsl	1500	BDW 800MI	1100	15,000
	10	dsl	1200	MAC 300	600	8,000
	1	dsl	1050	M-CSCO Unit U15A	700	10,500
	11	dsl	600	TSM 6000A	600	9,000
Triad Drlg	4	dsl		BRWSTR N7	800	11,000
Vaughn Good Drlg	2	dsl	1100	Cooper 650	600	12,000
Warrior Drlg	1	dsl		EMSCO	400	5,000
MAYES						
Winter Drlg & Expl	2	dsl	900	Jaswell J2400	900	2,400
MUSKOGEE						
Bodard & Hale Drlg	14	dsl	450	BRWSTR N4	450	6,500
NOBLE						
Fisher Drlg	1	dsl	450	BRWSTR N4	450	6,500
	4	dsl	500	WILSON Super 38	400	6,500/4"
Hughes Drlg	15	dsl	550	CABOT/FRANKS 550	475	8,000
	9	dsl	550	CABOT/FRANKS 550	475	8,000
Sabre Drlg Div TRG Drlg	153	dsl	450	UNIT U34	450	6,000
NOWATA						
Layton Oil	1	dsl	150	WILSON DBL	100	1,500
Winter Drlg & Expl	1	dsl	900	Jaswell J2400	900	2,400
OKFUSKEE						
Gold Star Drlg	2	dsl	450	IDECO Hydrair H37ED	450	6,500
OKLAHOMA						
Basin Drlg	16	dsl	1350	M-CSCO U-914C	1400	22,000
	15	dsl	1000	M-CSCO U-712A	1200	17,000
	17	dsl	1350	M-CSCO U-914C	1400	22,000
Big Chief Drlg	48	dsl-scr	4000	GAR-DEN 3000E	3000	35,000
	24	gas	1200	M-CSCO U15	900	11,000
Bigard Drlg, James	18	dsl-elec	1000	IDECO ED1200	2000	20,000
	11	dsl-elec	1000	IDECO ED1200	2000	20,000
Bodard & Hale Drlg	15	dsl	450	MAC 400	525	7,500
Bonray Drlg	7	dsl	476	COOPER 66	318	6,000
C E C Drlg	6	dsl	2400	GAR-DEN 800	1600	18,000
	2	dsl	1100	UNIT U15	800	10,000
	5	dsl	2400	GAR-DEN 800	1600	18,000
Drillers	40	dsl-elec	2100	GAR-DEN 1100E	2100	24,000
	26	dsl	700	EMSCO GB500	700	10,000
	21	dsl	300	EMSCO GB350	450	6,000

OKLAHOMA (Cont'd)

Contractor	Rig No.	Type Power	Total HP All Main Mud Pumps	Drawworks Make and Model	Total HP Available to Drwwks	Rated Depth with 4½" Pipe
OKLAHOMA (Cont'd)						
Falcon Drlg	1	dsl	400	BETH S45A	400	7,000
Fossil Drlg	3	dsl	1750	EMSCO GA500	1350	14,000
Johnson Bates Drlg	2	gas	325	M-CSCO U34	245	6,500
	14	dsl	700	M-CSCO U15	450	7,500
Nicor Drlg	82	dsl-mech	675	UNIT U34	300	8,000
	71	dsl-elec	2000	MIDCO U914EC	1400	21,000
	65	dsl-elec	2700	M-CSCO U914EC	1400	21,000
	15	dsl	2100	OILWELL 76	1000	15,000
	19	dsl	1650	IDECO 750	750	15,000
	3	dsl	1000	M-CSCO U15	700	11,500
	18	dsl	1050	UNIT U15	700	12,500
Oliver Drlg, E L	4	gas	600	Ideal T12	250	4,500
Penrick Drlg	106	dsl-elec	3200	BETH 1013	2000	16,000
Ratliff Drlg	8	gas-btne	1020	NATL 50A	1020	10,000
	10	gas	1020	NATL 50	1020	10,000
	16	dsl	750	UNIT U15	750	10,000
Robinson Bros Drlg	3	dsl	1000	WILSON 75	900	9,000
S & T Drlg	11	dsl	1300	UNIT 20	1300	12,000
S & T Drlg Northern	8	dsl	1500	GAR-DEN 800	1500	11,500
Smith Bros Drlg	6	dsl	800	UNIT U15	800	11,000
Tri-Service Drlg	11	dsl-elec	3000	M-CSCO 1220ED	3000	20,000
TWT Expl	54	dsl				10,000
Wilson Bros Drlg	16	dsl	2600	NATL 1320	2700	30,000
OSAGE						
Hughes Drlg	16	dsl	650	Speedstar SS40	375	4,000
	17	dsl	650	Speedstar SS40	375	4,000
Layton Oil	6	dsl	250	WILSON Double Drum	250	3,000
McLennan Drlg	4	dsl	318	GAR-DEN	238	2,000
PAYNE						
Bodard & Hale Drlg	4	dsl	450	M-CSCO U34	400	6,500
	16	dsl	450	IDECO H37	450	6,500
Gold Star Drlg	3	dsl	450	IDECO Hydrair H37ED	450	6,500
	4	dsl	500	UNIT U15	700	10,000
Sabre Drlg Div TRG Drlg	6	dsl	450	NATL T20	335	6,000
PITTSBURG						
Alexander Drlg	2	dsl	800	EMSCO G42	800	12,500
Astro Drlg	19	dsl	912	WILSON Super Giant	912	12,500
Basin Drlg	13	dsl	1470	GAR-DEN 700	1220	14,000
Big Chief Drlg	9	dsl	1200	IDECO H35S	700	10,000
Dual Drlg	8	dsl	1250	WILSON 75	750	9,500
	1	dsl	1500	WILSON 75P	900	12,500
	5	dsl	1500	WILSON Mogul	600	9,500
FWA Drlg	10	dsl	1150	WILSON Giant	720	11,500
Lagersen Drlg	4	dsl-elec	2000	EMSCO J1100E	2500	22,000
Lanex Drlg	B-12	dsl-scr	1600	EMSCO D2	750	13,000
Miller Drlg	2	gas	675	M-CSCO U15	675	12,000
	6	gas	900	NATL 75	900	13,500
	10	dsl	1500	OIME SL1500	1500	20,000
Moran Drlg, E W	14	dsl	1600	WILSON 150	1650	15,000
R W I T Drlg	8	gas-LPG	601	M-CSCO U34	280	6,000
Seneca Drlg	2	dsl-elec	800	UNIT U36EA	800	14,000
	1	dsl-elec	800	UNIT U36EA	800	14,000
Unit Drlg & Expl	5	dsl	600	UNIT U15	800	12,000
PONTOTOC						
Bauich Drlg	1	dsl	350	BRWSTR N4	275	4,800
Royal Drlg	1	dsl	300	EMSCO GB160	300	4,200
T E K Drlg	WS	dsl	265	WILSON Super	265	4,500
	F1500	gas	350	Failing 1500	380	1,500
POTTAWATOMIE						
Bodard & Hale Drlg	6	dsl	600	NATL T20	450	6,500
	11	dsl	450	MAC 300	450	6,500
	8	dsl	650	M-CSCO U36A	1100	13,500
	5	dsl	450	M-CSCO U34	425	8,500
Hughes Drlg	6	dsl	550	IDECO H35	400	6,250
Johnson Bates Drlg	4	dsl	400	M-CSCO U34	375	6,500
Scott Drlg, Jerry	7	dsl	350	WILSON Giant	380	7,000
ROGER MILLS						
Apollo Drlg Inc	2	dsl	1500	NATL 80B		16,000
Arden Drlg	1	dsl-elec	1600	EMSCO D2	1200	16,000
	5	dsl-elec	2400	EMSCO D3	2000	18,000
	15	dsl	2000	OIME SL7	1000	16,000
	7	dsl	1700	OIME SL7	1500	15,000
Brinkerhoff-Signal	56	dsl-elec		EMSCO A110E	2700	18,000
Challenger Drlg	37	dsl	2400	IDECO 2500	2400	28,000
	32	dsl	2400	NATL 1320	2400	20,000
Chapman Drlg	201	dsl-elec	2600	BRWSTR NE95	1700	19,000
Cliffs Drlg	38	dsl-elec	2800	OILWELL 840E	3300	18,000
Continental Drlg	5	dsl-elec	2600	IDECO E1700	1700	19,000
	1	dsl-elec	3200	IDECO E2100	2000	25,000
Eason Oil	25	dsl-elec	2600	EMSCO C1E	1500	21,000
Forex Neptune and/or Affil	53	dsl-elec	3200	GAR-DEN 1500E	2000	21,700
	52	dsl-elec	3200	GAR-DEN 1500E	2000	21,700
FWA Drlg	7	dsl	1500	WILSON Titan	1040	14,000
	5	dsl	1400	WILSON Giant	850	11,500
Grace/T R G Drlg	23	dsl	1400	NATL 80B	1305	14,500
	2	dsl	825	GAR-DEN 500M	870	10,000
	141	dsl-elec	2200	GAR-DEN 1500E	2400	22,000
	20	dsl-elec	2200	GAR-DEN 1100E	2400	18,000
	15	dsl	1000	GAR-DEN P28	1305	14,000
ROGER MILLS (Cont'd)						
Harper-Turner Drlg	1	dsl	800	NATL 55	1000	12,000
Helmerich & Payne Intl Drlg	48	dsl	1640	NATL 110	1820	22,000
	98	dsl-scr	2000	NATL 110ME	1500	20,000
	78	dsl-scr	2000	NATL 110UE	1500	20,000
	92	dsl-scr	2000	NATL 110ME	1500	20,000
Highbridge Drlg	34	dsl	1200	UNIT U15	1000	14,000
Lanex Drlg	A-12	dsl-scr	1600	EMSCO D2	750	13,000
Loffland Bros	311	dsl	2250	GAR-DEN 1500	2500	24,000
	123	gas	1975	NATL 130	2200	26,000
	102	dsl-elec	3300	M-CSCO U1220EBD	3300	28,000
Mercury Drlg	15	dsl	1300	NATL T1320M	2800	25,000
	1	dsl	1000	EMSCO 800	1470	16,000
	14	dsl	1000	UNIT 914	2100	22,000
Moran Bros	67	dsl	1700	EMSCO D3 Type III	1000	15,000
	34	dsl	1700	OILWELL 760	1000	15,000
Moran Drlg, E W	4	dsl	1600	WILSON 120	1100	15,000
Nicor Drlg	31	dsl-elec	2000	M-CSCO U914EC	1400	21,000
Nowotny & Conley Drlg	6	dsl-elec	3200	NATL 1320UE	3000	25,000
Parker Drlg	149	gas	1000	NATL 75	1000	16,000
	59	gas	1650	OIME 1500E	1650	20,000
Penrod Drlg	131	dsl	1000	NATL 80B	1760	
Quarles Drlg (OK)	6	dsl	2000	BRWSTR N95	2200	22,000
	1	dsl	1500	OIME 750	750	14,500
Ratliff Drlg	30	dsl	1650	Texas Flange	1650	18,000
	31	dsl	1650	Texas Flange	1650	18,000
Rowan Drlg US	31	dsl	3200	NATL 1625	3300	30,000
	14	dsl	3200	NATL 1625M	3000	35,000
	7	dsl	3200	EMSCO A1500	2500	22,000
Sandia Drlg	3	dsl	3000	EMSCO D3	3000	18,000
Santa Fe Drlg Western	15-W	dsl	3200	EMSCO C3	3000	30,000
Sharp Drlg	58	dsl	2319	OILWELL 96	2607	23,000
	369	dsl-elec	1488	UNIT U712EC	1995	18,000
Slawson Drlg	8	dsl	750	IDECO H725	750	11,500
Triad Drlg	7	dsl		GAR-DEN 800	1100	16,000
	8	dsl	2250	GAR-DEN 1500	2250	24,000
U R C Drlg	2	dsl	1100	NATL 100	1100	15,000
Viersen & Cochran Drlg	3	dsl	800	NATL 75CA	800	14,000
	5	dsl	600	OILWELL 660	800	12,000
	1	dsl	800	OILWELL 660	800	12,000
Wilson Bros Drlg	22	dsl-elec	2800	OILWELL E2000	2000	25,000
	17	dsl	2600	NATL 110	2700	20,000
	19	dsl	800	NATL 80B	1425	16,000
	21	dsl	800	NATL 80B	1425	16,000
	20	dsl	800	NATL 80B	1425	16,000
SEMINOLE						
Bates-Great Western Energy	16	dsl	1000	BDW 800MX	1000	14,000
Johnson Bates Drlg	7	dsl	1000	WILSON Titan	1350	12,000
	5	dsl	1000	M-CSCO U15	1100	10,000
	15	dsl	1350	WILSON Titan	1575	14,000
Scott Drlg, Jerry	8	dsl	1520	UNIT U15	1000	11,000
	1	dsl	350	BRWSTR N4	350	5,500
	4	dsl	600	BETH C50	640	10,000
	2	dsl	420	UNIT U34	430	6,500
Sloan Drlg	18	dsl	450	WILSON 42	450	7,000
	10	dsl	370	M-CSCO U34	475	6,500
	14	dsl	370	NATL T20	500	6,500
	12	dsl	370	BRWSTR N4	475	6,500
SOYRE						
Lanex Drlg	C-12	dsl-scr	1600	BDW 800	800	16,000
STEPHENS						
Adeco Drlg & Engr	17		690	OIME SL750	1035	14,000
Johnson Bates Drlg	3	dsl	1100	M-CSCO U34	1100	10,500
Jones Drlg Corp	10	dsl	2000		2000	20,000
	6	dsl	500		400	7,000
	16	dsl	850		1400	16,000
	11	dsl	600		600	10,000
	5	gas	400	BETH S45	400	7,000
	12	dsl	1200		1200	10,000
	15	dsl	900		1000	14,000
	2	dsl	385		385	5,000
Loffland Bros	104	dsl-elec	3300	EMSCO 3000	3300	35,000
Magic Circle Drlg	17	dsl	2460	OILWELL 96	2460	20,000
Plotner Drlg	2	dsl	1000	All Rig 1200	2000	20,000
Repco	8H	dsl	636	Hopper	350	7,000
	2H	dsl	636	Hopper	440	6,100
Smart Drlg	5	dsl	860	NATL 50CA	950	10,000
Thomas Drlg	10	dsl	600	WILSON Super Giant	600	11,000
	11	dsl	300	Wichtex R-6	300	6,000
Vi-Roi Drlg	2	dsl	120	Howard-Turner 100	210	3,000
	1	dsl	435	WILSON Mogul 42	435	6,500
SWEETWATER						
Dual Drlg	34	dsl	2000	EMSCO D3	1000	16,000
	35	dsl	2000	EMSCO D3	1000	16,000
TEXAS						
H30 Drlg	8	dsl	600	IDECO H40	600	10,000
Moran Drlg, E W	26	dsl	1000	CEI 75D	750	11,000
Service Drlg (OK)	3	dsl	300	UNIT RU34	400	6,500
	8	dsl	836	UNIT RU34	636	10,000
Service Drlg (TX)	10	dsl	300	M-CSCO	400	5,000
	4	dsl	500	M-CSCO U15	800	9,200

Contractor	Rig No.	Type Power	Total HP All Main Mud Pumps	Drawworks Make and Model	Total HP Available to Drwwks	Rated Depth with 4½" Pipe
OKLAHOMA (Cont'd)						
TILLMAN						
Tierra Drlg	19	dsl-elec	800	UNIT 36EA	650	12,000
TULSA						
Baker Oil & Drlg	2	dsl	150	GAR-DEN 2000	150	2,000
Hemphill Corp	T-4	dsl	115	Ingersol-Rand Hydraulic	700	4,000
VERDEN						
Dual Drlg	26	dsl	1800	WILSON 150A	1650	16,000
WASHINGTON						
Equity Drlg	150	dsl	300	Failing 2500	300	3,000/3.5"
WASHITA						
Cactus Drlg Co	29	dsl	1830	NATL 110	2700	20,000
Challenger Drlg	6-E	dsl	900	NATL 80E	1000	14,000
Chapman Drlg	151	dsl-elec	2000	BRWSTR NE95	1700	18,000
Drillers	10	dsl	1600	NATL 100M	1600	18,000
	44	dsl-elec	2000	GAR-DEN 2000	2000	22,500
Enopco	1	dsl	2430	NATL 110M	2430	20,000
Grace/T R G Drlg	133	dsl-elec	2000	GAR-DEN 1100E	2400	18,000
	134	dsl-elec	2200	GAR-DEN 1500E	2400	22,000
	132	dsl-elec	3000	GAR-DEN 3000E	3000	30,000
	19	dsl-elec	2200	GAR-DEN 1500E	2400	22,000
Helmerich & Payne Intl Drlg	89	dsl-el-scr	2730	NATL 110UE	2730	20,000
	99	dsl-scr	3400	OILWELL E2000	2000	26,000
Lagersen Drlg	8	dsl-elec	2000	EMSCO CIE	2500	22,000
Loffland Bros	327	dsl	2250	GAR-DEN 1500	2500	24,000
	218	dsl-elec	3300	M-CSCO U1220E	2200	28,000
	227	dsl	2400	M-CSCO U914A	2500	22,000
	324	dsl	2250	GAR-DEN 1500	2500	24,000
Magic Circle Drlg	18	dsl-elec	4000	EMSCO C2	2000	25,000
Matagorda Drlg	15	dsl	2000	NATL 80B	1500	15,000
Moran Drlg, E W	5	dsl	1850	WILSON 120	1100	18,000
	28	dsl-elec	3200	GAR-DEN 3000E	3000	40,000
	9	dsl	2600	WILSON 150	1500	18,000
Murco Drlg	50	scr	2200	OILWELL 860E	2000	18,000
	54	dsl-scr		GAR-DEN 1100E		18,000
Nicor Drlg	55	dsl-elec	2000	UNIT U914EC	1400	21,000
	4	dsl	1500	GAR-DEN 800	1000	15,000
Noble Drlg	N-85	dsl	1830	NATL 80B	1830	15,000
	GD2	dsl	3135	GAR-DEN 2100	3135	25,000
	N-117	dsl	3645	NATL 110UE	3645	20,000
Parker Drlg	43	gas	1800	OILWELL 96	1800	20,000
	142	dsl	2600	NATL 1320E	3000	25,000
	167	dsl	1650	OIME SL1500	1650	20,000
	170	dsl	1650	OIME SL1500P	1650	20,000
Penrod Drlg	130	dsl	1000	NATL 80B	1760	15,000
	26	dsl	2600	EMSCO C2	1950	25,000
Quarles Drlg (OK)	12	dsl	2700	M-CSCO U914C	2400	22,000
Republic Drlg & Serv	3	dsl-elec	1950	OILWELL 740E	1000	14,000
Resource Drlg	RD-24	dsl	2330	NATL 110	2740	18,000
Robinson Bros Drlg	6	dsl	2200	NATL	1600	18,000
	7	dsl-elec	1750	NATL 80UE	1500	12,000
	22	dsl	2000	EMSCO E900	2000	15,000
	18	dsl	2000	GAR-DEN 1500E	2000	20,000
	27	dsl	1050	IDECO H725	1500	16,000
Rowan Drlg US	30	dsl	2600	EMSCO A1500	2400	22,000
	5	dsl	3200	NATL 1625M	3000	35,000
Sandia Drlg	1	dsl	3000	GAR-DEN E800	3000	18,000
Santa Fe Drlg Mid-Continent	8M	dsl-elec	1500	OIME SD7E	2400	18,000
	2M	dsl-elec	750	IDECO E900	900	4,000
Santa Fe Drlg Western	95-W	dsl-elec	2800	OILWELL E2000	2000	25,000
	21-W	dsl-elec	2800	NATL 110UE	1500	16,000
	22-W	dsl-elec	2600	NATL 10UE	1500	16,000
Sharp Drlg	39	dsl	2331	OILWELL M2000	2742	30,000
	40	dsl	1770	OILWELL 96	2025	18,000
	71	dsl-elec	2331	UNIT U914EC	2742	23,500
	52	dsl	1560	BETH M810	1836	19,000
Smart Drlg	11	dsl	2000	NATL 100	1000	20,000
	12	dsl-elec	2000	OILWELL 840E	2000	18,000
	7	dsl-elec	1500	UNIT U20	1000	16,000
Smith & Stovall Drlg	6	dsl	1300	IDECO H1700	2000	18,000
Triad Drlg	6	dsl		BRWSTR N95A	1650	20,000
Warrior Drlg	4	dsl	1800	BDW	1000	17,000
WHEELER						
Helmerich & Payne Intl Drlg	44	dsl	1650	NATL 110	1815	22,000
WOODS						
Bonray Drlg	3	dsl	900	BRWSTR N7	900	10,500
Damac Drlg	2	dsl	310	WILSON Giant	310	6,600
Drillers	36	dsl	600	EMSCO GB350	700	8,500
Magic Circle Drlg	14	dsl	320	CABOT/FRANKS 2042	700	9,500
Oliver Drlg, E L	3	dsl	340	NATL T32	340	8,000
WOODWARD						
Astro Drlg	17	dsl	1050	CABOT/FRANKS 750	700	11,000
Bighorn Drlg	1	dsl	1200	NATL 370	900	9,000
Drillers	11	dsl-hydra	1500	Automatic H2000	2000	12,000
Freeman Drlg	1	dsl	525	IDECO H40	600	8,500
Johnson Bates Drlg	8	dsl	1000	WILSON Giant U15	1050	12,000
Midco Drlg	2	dsl	750	UNIT U15	750	13,000
OKLAHOMA (Cont'd)						
WOODWARD (Cont'd)						
Pulliam Drlg	18	dsl	900	EMSCO GA250T	350	8,000
Rine Drlg	3	dsl	750	BRWSTR N55	750	9,500
	6	gas	700	BRWSTR N75	750	12,000
Sage Drlg	3	dsl	400	IDECO H40	400	8,500
Search Drlg	5	dsl-elec	2000	BRWSTR 1000	1000	14,000
	6	elec	2000		1000	14,000
	2	dsl	950	IDECO H725C	950	10,000
	4	dsl-elec	2700	GAR-DEN 1500E	3000	24,000
	1	dsl	640	NATL T32	640	6,000
	3	dsl	956	IDECO H725-C	950	10,000
Triad Drlg	3	dsl		BRWSTR N55	800	12,000
U R C Drlg	1	dsl	860	NATL 50	860	10,000
OREGON						
COLUMBIA						
Taylor Drlg	5	dsl	350	M-CSCO U34	375	4,000
PENNSYLVANIA						
ARMSTRONG						
DOC-NCC Drlg	2	dsl	300	BRWSTR RR600	575	9,000
	1	dsl	300	WILSON Torcair 42	350	4,000
BEDFORD						
Delta Drlg	71	dsl	1000	Spencer 7000	440	9,000
CAMBRIA						
Ray Resources	8	dsl	450	BRWSTR N55	800	10,000
CLEARFIELD						
Fairman Drlg	14	dsl	400	BRWSTR	350	7,500
	6	dsl	350	IDECO H44	550	8,000
	8	dsl	350	IDECO H44	550	8,000
	9	dsl	400	IDECO H44	500	8,000
	12	dsl	400	IDECO	250	5,000
CLINTON						
Delta Drlg	72	dsl	250	Spencer 7000	440	9,000
CRAWFORD						
International Petr Serv	4	dsl	475	WILSON 42	475	7,500
ERIE						
Underwater Gas Dev	3	dsl	320	Challenger 320	320	5,000
Union Drlg	7	dsl	1200	CABOR/FRANKS 500	425	6,500
	12	dsl	1200	CABOT/FRANKS 500	425	6,500
	14	dsl	1200	Crdwll KB250	425	6,500
	10	dsl	1200	IDECO BIR5535	425	7,500
FAYETTE						
International Petr Serv	12	dsl	475	Challenger Model 320	300	4,000
GREENE						
Union Drlg	2	dsl	1200	IDECO BIR5525	425	6,000
INDIANA						
Delta Drlg	67	dsl		Spencer 7000	480	9,000
	79	dsl	255	IDECO H35KD	291	6,000
	77	dsl	250	IDECO H35KD	291	6,000
	92	dsl	255	IDECO H35KD	291	6,000
	91	dsl	255	IDECO H35KD	291	6,000
Fairman Drlg	5	dsl	400	Crdwll	350	4,000
JEFFERSON						
Fairman Drlg	15	dsl	300	IDECO	300	5,000
VENANGO						
P E P Drlg	8	dsl	550	GAR-DEN 500	500	10,000
WARREN						
Devonian Drlg	1	dsl	505	Kremco K600	475	7,000
International Petr Serv	3	dsl	350	CPT750DH	285	4,500
	10	dsl	600	WILSON Mogul 42	475	7,500
	5	dsl	475	WILSON 42	475	7,500
WESTMORELAND						
Fairman Drlg	10	dsl	400	WILSON Mogul 42	350	5,000
	11	dsl	400	IDECO H44	500	8,000
International Petr Serv	8	dsl	600	WILSON Mogul 42	475	7,500
SOUTH DAKOTA						
UNDESIGNATED						
Hussar Drlg	1	dsl	500	EMSCO GA250	300	7,500
HARDING						
Cardinal Drlg	15	dsl	1080	EMSCO GA500	760	10,000
Elenburg Expl	3	dsl	320	Wlkr-Nr CC2000	230	2,500
Exeter Drlg Northern	10	dsl	500	BRWSTR N55	750	10,500

TENNESSEE

Contractor	Rig No.	Type Power	Total HP All Main Mud Pumps	Drawworks Make and Model	Total HP Available to Drwwks	Rated Depth with 4½" Pipe
CLAY						
Miller Contract Drlg	20	dsl		Ingersoll T4	400	2,500
CUMBERLAND						
Delta Drlg	83	dsl	2600	EMSCO C1 Type III	2331	18,000
FENTRESS						
Miller Contract Drlg	18	dsl		Ingersoll T4	600	3,500
Norman Drlg, James R	1	dsl	750	Ingersoll	450	2,500
	2	dsl	750	Ingersoll	450	2,500
MORGAN						
B-J Inc	2	dsl	525	INGERSOLL	525	3,000
Miller Contract Drlg	17	dsl	400	Spencer	400	3,000
OVERTON						
B-J Inc	3	dsl	400	Drill-Tec	400	2,500
Miller Contract Drlg	2	dsl	400	Ingersoll	400	3,000
	21	dsl	425	Spencer 6000	425	7,000
	10	dsl	525	Ingersoll	525	3,000
SCOTT						
B-J Inc	1	dsl	525	INGERSOLL	525	3,000
Miller Contract Drlg	9	dsl	525	Ingersoll	525	3,000

TEXAS

Contractor	Rig No.	Type Power	Total HP All Main Mud Pumps	Drawworks Make and Model	Total HP Available to Drwwks	Rated Depth with 4½" Pipe
UNDESIGNATED						
Brunner Drlg	4	dsl		IDECO H38D	350	5,000
	2	dsl		BRWSTR N4	375	6,000
Cape Drlg	6	dsl	1500	MIDWAY 750D	800	13,500
Faith Drlg	2	dsl	1500	NATL 55	1300	12,000
Gibson Drlg	6	dsl	506	WILSON Mogul 42	318	5,000
	5	dsl	1030	WILSON 75P	700	9,000
	8	dsl	529	WILSON 65	380	5,000
	1	dsl	606	WILSON Mogul 42	398	5,000
	4	dsl	506	WILSON Mogul Model 65	398	5,000
	12	dsl	900	EMSCO D2	900	12,000
Herb Expl	1	gas-btne		Failing 1500	100	1,500/2.38"
Hillin Drlg	5	dsl	1200	NATL H1200	1200	15,000
Koch, I E Drlg	2	dsl	300	LMI 1436	300	3,500
Megargel Drlg	10	dsl	750	UNIT Double Jacknife U15	750	7,000
Parker Drlg	133-HH/21	dsl	1500	OIME TBA2000	1700	20,000
	129-HH/17	dsl	1500	OIME TBA2000	1700	20,000
Santa Fe Drlg	SFW-10	dsl-elec	2000	EMSCO Electrohoist H11	1800	24,000
	SFW-8	dsl-elec	2600	EMSCO A1500E	2000	30,000
	SFW-14	dsl-elec	3200	EMSCO C3111	3000	30,000
	SFW-12	dsl-elec	2300	EMSCO A1100E	1800	20,000
	SFW-2	gas	1700	BETH M1013	2118	22,000
	SFW-16	dsl-elec	1300	EMSCO C11	2000	25,000
	SFW-3	dsl-elec	2900	EMSCO A1500E	2000	30,000
	SFW-6	dsl-elec	2300	EMSCO C3111	3000	30,000
	SFW-4	dsl-elec	2600	EMSCO C3111	3000	30,000
	SFW-5	gas	2200	BETH B1013	2118	22,000
Tricon/B-E Drlg	1	dsl	900	EMSCO A500	900	10,000
TMBR Drlg	14	gas	700	M-CSCO U15	700	10,000
	9	dsl	1050	NATL 75CA	1050	12,500
	21	dsl	1100	NATL 75CA	1100	13,000
Verna Corp	36	dsl	550	M-CSCO U15	550	11,000
	39	dsl	600	M-CSCO U15	550	11,000
ANDERSON						
Lohmann Drlg	12	dsl	700	OILWELL 600	600	10,000
Maxwell Herring Drlg	15	dsl	1200	Spencer	400	10,000
Verna Corp	25	dsl	1000	M-CSCO U15	600	10,000
ANDREWS						
BJM Drlg & Expl	1	dsl	1200	UNIT U15	1000	12,000
Cactus Drlg Co	63	dsl	520	BRWSTR N4	454	6,000
	58	dsl	520	BETH S45E	454	6,500
	18	dsl	520	NATL T32	670	8,500
Cactus Drlg Corp	22	dsl	1650	NATL 100	1650	15,000
Hillin Drlg	2	dsl	800	EMSCO G500	800	11,000
Johnn Drlg	10	dsl	800	OILWELL 66	800	10,000
Kenai Drlg of Texas	11	dsl	400	NATL T20	400	6,500
M G F Drlg-Midland	2	dsl	800	M-CSCO U15	800	10,000
Price & Co, J A	4	dsl-elec	1350	BRWSTR NE46	1250	12,500
R Rigs Inc	4	dsl	375	Shaffer 6000S	500	8,500
Resource Drlg	2	dsl	1560	NATL 80B	1835	14,000
Rio Colorado Drlg	143	dsl	1200	NATL T45	1100	12,000
Sharp Drlg	48	dsl	790	BETH M58	938	13,500
Sterling Drlg (TX)	9	dsl	1350	BRWSTR N75	1100	14,000
	20	dsl	1260	NATL 610	840	13,000
Trafalgar Drlg	1	dsl	680	NATL T20	486	7,500
Tri-Service Drlg	3	gas-btne	750	OILWELL 76	750	13,000
	6	dsl	1800	OILWELL 96	1800	16,000
TMBR Drlg	17	dsl	350	M-CSCO U15CA	500	9,000
	2	dsl	350	Weiss W45	450	7,000
	6	dsl	700	NATL 75CA	750	12,000

TEXAS (Cont'd)

Contractor	Rig No.	Type Power	Total HP All Main Mud Pumps	Drawworks Make and Model	Total HP Available to Drwwks	Rated Depth with 4½" Pipe
ANDREWS (Cont'd)						
Verna Corp	38	dsl	1212	M-CSCO U15	800	11,000
	20	dsl	1000	Verna Drlg	1500	16,000
	40	dsl	700	M-CSCO U15 Type	800	11,000
	15	dsl	600	M-CSCO	600	11,500
	6	dsl	550	BRWSTR N55	800	12,000
Warton Drlg	10	dsl-elec	750	NATL 80UE	2100	16,000
ANGELINA						
Lagersen Drlg	5	dsl-elec	1600	EMSCO J750E	1250	16,000
Lester Drlg, Dan	8	dsl	1850	OILWELL 760	1500	16,000
ARCHER						
E & H Drlg	4	gas-LPG	550	M-CSCO U15	550	7,500
Lin-Mour Drlg	4	gas	400	WILSON Mogul	310	5,000
	6	dsl	700	WILSON Giant	700	9,000
ATASCOSA						
Buzzini Drlg	10	dsl	3600	OILWELL M2000	2400	20,000
F-W Drlg	8	dsl	800	BRWSTR N42	750	11,000
M G F Drlg-Houston	30	dsl	750	NATL 610	800	12,000
South Texas Drlg	6	dsl	650	BRWSTR N46	800	10,000
	9	elec	1350	GAR-DEN 1500E	2000	25,000
	8	dsl	600	BRWSTR N46	550	8,000
AUSTIN						
Wilson Bros Drlg	7	dsl	1400	NATL 80B	1400	12,500
BAYLOR						
Lin-Mour Drlg	3	gas	250	UNIT 34	180	5,000
BEE						
B D K Drlg	9	dsl	1480	BRWSTR N75	1000	12,000
PRC Drlg	7	dsl	1700	GAR-DEN 800M	1040	16,000
BORDEN						
Cactus Drlg Corp	19	dsl	800	NATL 50A	800	10,000
Delta Drlg	86	dsl	500	Spencer 7000	480	9,000
Douglas Drlg	1	dsl	700	NATL 50CA	700	10,000
Kenai Drlg of Texas	16	dsl	700	EMSCO GA500	780	11,000
Lee Drlg	1	dsl	1100	BDW 450T	500	9,000
McCutchen Drlg, J W	4	dsl	820	WILSON 90	820	12,000
Moran Bros	63	dsl	1300	NATL T45	550	10,000
Robinson Drlg of Texas	4	dsl	750	NATL 50A	900	12,500
Wes-Tex Drlg	5	dsl	550	NATL 50A	700	10,000
BOWIE						
Delta Drlg	22	dsl	1800	EMSCO D3 Type III	1560	14,000
BRAZORIA						
Bilbo Drlg	4	dsl	800	CABOT/FRANKS 900	900	11,500
Challenger Drlg	48	dsl	1000	UNIT U36	1000	13,000
Delta Drlg	20	dsl-el-scr	2600	EMSCO C2 Type II	3456	20,000
Drillers	15	dsl	1000	OILWELL 66	800	12,000
	5	dsl	900	UNIT U15M	1200	11,000
Frio Drlg	3	dsl	900	BRWSTR N55	900	10,500
	4	dsl	1100	NATL N55	1100	12,000
Goldrus Drlg	18	dsl	1700	1000 CABOT/FRANKS	872	14,000
Loffland Bros	107	dsl	2160	BRWSTR N12	2400	17,000
M G F Drlg-Houston	39	dsl	2200	NATL 125	1500	20,000
M N D Drlg-Southern	10	dsl-elec	1820	BRWSTR N95	1820	20,000
BRAZOS						
Atco Drlg Southern	4	dsl	1550	NATL 55	550	12,000
Basin Drlg	11	dsl	1470	GAR-DEN 700	1220	14,000
	12	dsl	1470	GAR-DEN 700	1220	14,000
Challenger Drlg	35	dsl	800	BRWSTR N75	1200	12,000
Chapman Drlg	107	dsl-mech	1100	BRWSTR Model N46	800	11,000
Merit Drlg	8	dsl-scr	1200	OILWELL 660E	700	11,000
	9	dsl-scr	1200	OILWELL 660E	700	11,000
Nicor Drlg	51	dsl-mech	1600	IDECO H900M	1000	15,000
Pozos Intl Drlg Serv	80	dsl	1890	BRWSTR N46	940	12,500
Rio Colorado Drlg	140	dsl	1200	NATL T45	900	10,000
Rio Grande Drlg	7	dsl	750	OIME SL5	1500	12,000
Spartan Drlg	16	dsl-elec	600	Superior 700UE	750	10,000
	12	dsl-elec	600	Superior 700UE	750	10,000
Sterling Drlg (TX)	10	dsl	1400	BRWSTR N75	1100	13,000
BRISCOE						
Robinson Bros Drlg	26	dsl	1050	IDECO H725	1500	16,000
BROOKS						
Flournoy Drlg	3	dsl	1560	M-CSCO U40	1040	12,000
Frio Drlg	2	dsl	800	NATL J45	600	10,000
Magee-Poole Drlg	4	dsl	1500	CABOT/FRANKS 900	950	11,000/4"
Willis Drlg	4	dsl	1200	BRWSTR N85	1200	14,000

TEXAS (Cont'd)

Contractor	Rig No.	Type Power	Total HP All Main Mud Pumps	Drawworks Make and Model	Total HP Available to Drwwks	Rated Depth with 4½" Pipe
BURLESON						
B D K Drlg	6	dsl	1000	BRWSTR 4610	950	10,000
Bilbo Drlg	3	dsl	900	CRDWLL KB250	800	8,000/4"
Blocker Drlg-Alice	19	dsl	1475	CABOT/FRANKS 2346	950	10,000
	18	dsl	1475	CABOT/FRANKS 2346	950	10,000
Chapman Drlg	101	dsl-mech	1800	NATL 610	750	12,500
D B Drlg	25	dsl	410	UNIT U15	825	11,000
	7	dsl	1380	NATL 50A	980	11,500
F-W Drlg	14	dsl	800	IDECO	750	11,000
M G F Drlg-Houston	8	dsl	800	UNIT U15	550	10,500
	6	dsl	600	NATL T32	500	9,000
	7	dsl	700	BRWSTR N55	800	11,000
Rainbow Drlg	3	dsl	1600	CABOT/FRANKS 900	900	11,000
Resource Drlg	17	dsl	1500	NATL 80B	1835	14,000
	RD-20	dsl	1040	NATL 610	1220	12,000
	16	dsl	1560	NATL 80B	1835	14,000
Southland Drlg	6	dsl	600	Howard-Turner 1887600TD	600	8,500
CALDWELL						
McConnell Drlg	1	dsl	300	NATL T12	200	4,000
Nixon Drlg	6	dsl	300	Stuart	300	4,000
	5	dsl	300	WILSON	300	4,000
	1	dsl	300	Crdwll CatD	300	4,000
	4	dsl	300	Stuart	300	4,000
CALHOUN						
Penrod Drlg	132	dsl	1000	NATL 80B	1760	
	128	dsl	1000	NATL 80B	1760	15,000
CALLAHAN						
F-W Drlg	3	dsl	600	NATL T12	407	5,000
I X Drlg	7	dsl	476	Crdwll S350	416	7,500
Mesa Drlg	5	dsl	725	TSM 6000	450	7,500
Morrison Drlg & Prod	101	dsl	450	NATL T20	476	6,000
CAMERON						
Goldrus Drlg	23	dsl	870	CABOT/FRANKS 900	880	12,000
CAMP						
Butler-Johnson	14	dsl-elec	2000	GAR-DEN 1100E	2000	20,000
CARSON						
Service Drlg (OK)	1	dsl	300	UNIT RU34	400	5,500
CASS						
France Drlg	5	elec	2400	OILWELL 760E	2400	17,000
Thunderbolt Drlg	52	dsl	1700	NATL 55	1845	13,000
United Drlg Div	10	dsl	950	UNIT U34	470	6,500
CHAMBERS						
Big 6 Drlg	7	dsl	800	IDECO	600	10,000
Chapman Drlg	104	dsl-elec	1500	BRWSTR N46E	750	13,000
	105	dsl-elec	1600	NATL 610E	750	13,000
Cinco Drlg	1	dsl	900	M-CSCO U15	780	11,000
Diamond M Land Drlg	107	dsl	1750	WILSON Mod 90	1605	12,500
FWA Drlg	16	dsl	1350	WILSON Mogul 42	730	9,000
M G F Drlg-Lafayette	43	dsl	1800	OILWELL 96	1200	18,000
M N D Drlg-Southern	11	dsl-elec	1820	BRWSTR N95	1820	20,000
Nicor Drlg	67	dsl-elec	1700	OILWELL 660E	800	12,000
Richards Drlg	3	dsl	1800	BRWSTR N75	1200	12,500
Sanders Drlg	1	dsl	2000	EMSCO A800	1100	14,000
South Texas Drlg	4	dsl	1000	BRWSTR 1046	750	10,000
T-L Drlg	20	dsl	2700	BRWSTR N95A	2700	17,000
CHEROKEE						
Forex Neptune and/or Affil	47	dsl-elec	3200	GAR-DEN 1100E	1500	18,000
Gibson Drlg	9	dsl	1030	WILSON Mogul 75P	700	9,000
Lester Drlg, Dan	10	dsl	1800	OILWELL 860	2400	20,000
Noble Drlg	OW-77	dsl	800	OILWELL 760	800	14,000
Rotary Drlg	10	dsl	850	Spencer 7000	700	10,600
	9	dsl	800	EMSCO	700	10,500
Wheless Drlg	10	dsl	1800	EMSCO C13	1800	16,000
CHILDRESS						
Luke Grace Drlg	1	gas-tbne	500	M-CSCO U15	750	10,500
CLAY						
Bearden Drlg, Jack E	7	dsl	600	WILSON Mogul 42	400	6,500
Bennett Prod Corp	1	dsl	900	UNIT R15	900	13,000
	2	dsl	900	UNIT R15	900	13,000
Burns L D Drlg	5	dsl	744	BETH S55	780	10,000
	2	dsl	900	WILSON 75	780	10,500
Lin-Mour Drlg	31	gas	700	WILSON Giant	700	9,000
	33	gas	550	WILSON Giant	550	9,500
	8	gas	400	EMSCO G42	400	6,500
Megargel Drlg	16	dsl	500	Schaffer S8000	500	8,000
Min-Tex Drlg	34	dsl	400	Hyster Mod B	500	7,500
Theiss Drlg	2	dsl	900	EMSCO U15	900	10,000
COCHRAN						
Cherokee Drlg & Dev	3	dsl	1150	WILSON 75	900	11,000
Sitton Drlg	5	dsl	450	WILSON 75P	900	11,500

TEXAS (Cont'd)

Contractor	Rig No.	Type Power	Total HP All Main Mud Pumps	Drawworks Make and Model	Total HP Available to Drwwks	Rated Depth with 4½" Pipe
COKE						
FWA Drlg	14	dsl	900	WILSON Mogul 42	600	7,500
GCO Drlg	1	dsl	640	NATL T20	450	7,500
COLEMAN						
Bandera Drlg	9	dsl	700	MAC 300	475	7,500
Safari Drlg	8	dsl		Detroit Diesel 8V		8,000
	7	dsl	480	EMSCO G42	560	7,000
COLLIN						
Moran Drlg, E W	6	dsl	950	BETH S55	750	11,000
COLORADO						
Cinco Drlg	11	dsl-elec	2000	Superior 1000	1000	16,000
Delta Drlg	87	dsl-scr	2000	EMSCO D3 Type II	2592	16,000
	81	dsl	1300	Spencer 7000	480	9,000
Eagle Prod & Drlg Serv	9	dsl-elec	1600	OILWELL E700	1400	12,000
Frio Drlg	1	dsl	800	EMSCO 350	550	9,500
Loffland Bros	77	dsl	1450	NATL 100	1575	15,000
Merit Drlg	10	dsl-scr		OILWELL 730E	1000	15,000
Padre Drlg	6	dsl	500	BRWSTR H4210	400	7,500
COMAL						
Loffland Bros	331	dsl	2160	M-CSCO U1220	2400	20,000
CONCHO						
Lynx Drlg	1	dsl	1000	UNIT U15	720	10,000
McBay Oil & Gas	1	dsl	3406	WILSON Super 38	3306	5,000
Mellon Drlg	3	dsl	750	BETH S50	375	6,200
COOKE						
Felderhoff Bros Drlg	2	dsl	950	WILSON Giant	650	9,500
	1	dsl	285	WILSON Mogul	185	5,500
COTTLE						
Bearden Drlg, Jack E	9	dsl	1200	WILSON Mogul Super 42	900	9,000
Safari Drlg	1	dsl	640	UNIT U15	640	10,000
CRANE						
Cactus Drlg Corp	20	dsl	800	BRWSTR N45	800	7,000
Hillin Drlg	6	dsl	500	IDECO H25 Trailer Rig	350	5,000
	8	dsl	500	WILSON 42 Mogul	400	6,000
Johnn Drlg	8	gas	800	BRWSTR N75	800	12,500
	4	dsl	700	M-CSCO U15	700	8,500
Kenai Drlg of Texas	32	dsl	1200	EMSCO GA500	800	11,000
Norwood, A N	1	dsl	450	WILSON Super 38	350	5,500
TMBR Drlg	18	dsl	500	M-CSCO U15CA	840	10,000
CROCKETT						
D B Drlg	12	dsl	2000	NATL 100	1500	16,000
	14	dsl	1290	NATL 50A	950	11,000
Delta Drlg	70	dsl	300	Spencer 6000	380	7,000
Loffland Bros	118	dsl-elec	3300	M-CSCO U1220EBD	3300	25,000
Rod Ric	4	dsl	750	IDECO H40	600	8,500
Santa Fe Drlg Western	12	dsl-elec	2000	EMSCO A1100E	1800	19,000
Sterling Drlg (TX)	11	dsl	375	IDECO H30	480	6,500
Tucker Drlg	11	dsl	525	BDW 800	1200	14,000
TMBR Drlg	26	dsl	700	GAR-DEN 500	700	11,000
Wes-Tex Drlg	15	dsl	335	BRWSTR N4	503	8,000
	2	dsl	650	BETH S45E	650	10,000
CULBERSON						
Kenai Drlg of New Mexico	2	dsl	2000	EMSCO J1100	2000	15,000
Verna Corp	11	dsl	550	M-CSCO U15	810	11,500
DAWSON						
Ard Drlg	4	dsl	900	M-CSCO U15	900	12,000
Cactus Drlg Co	59	dsl	520	BRWSTR N4	454	6,000
	52	dsl	520	IDECO H35	454	6,500
FWA Drlg	8	dsl	1065	WILSON Giant	900	11,000
Holliday Drlg	2	dsl	1200	OILWELL 76	1200	14,000
Hondo Drlg	7	gas	1000	BRWSTR N55	750	12,000
M G F Drlg-Midland	9	dsl	850	EMSCO GC500	850	14,000
Republic Drlg & Serv	4	dsl-elec	1200	OILWELL 760E	1000	14,000
Robinson Drlg of Texas	6	dsl	950	BETH M58	1350	12,500
Sledge Drlg, D	3	gas	650	NATL 50A	850	12,500
DE WITT						
B D K Drlg	10	dsl	1000	BRWSTR N46	900	10,000
Corpus Christi Drlg	5	dsl	300	WILSON Super 38	250	6,000
Magee-Poole Drlg	1	dsl	1500	CABOT/FRANKS 900	950	11,000/4"
Southland Drlg	2	dsl	1300	BRWSTR 75A	1150	12,000
DICKENS						
Verna Corp	10	dsl	700	M-CSCO U36A	1200	12,000
Wes-Tex Drlg	14	dsl	335	BRWSTR N4	500	8,000
DIMMIT						
Blocker Drlg-Alice	6	dsl	1500	CABOT/FRANKS HT Expl Rocket	950	10,000
Cothrum Drlg	11	dsl	250	GAR-DEN 210B	250	10,000
Dixon Drlg	12	dsl	900	BRWSTR N4	450	7,000
	10	dsl	900	BRWSTR N46	950	18,000

TEXAS (Cont'd)

Contractor	Rig No.	Type Power	Total HP All Main Mud Pumps	Drawworks Make and Model	Total HP Avail-able to Drwwks	Rated Depth with 4½" Pipe
DUVAL						
Chapman Drig	301	dsl-elec	3200	GAR-DEN 3000E	3000	30,000
Corpus Christi Drig	6	dsl	300	BRWSTR 550	450	6,000
Delta Drig	88	dsl-scr	2600	EMSCO C1 Type II	3456	18,000
	95	dsl-elec	2900	EMSCO CI Type II	3456	20,000
Dixilyn-Field Drig	4	dsl	2600	NATL 1625M	3105	30,000
Harkins & Co	4	dsl	1260	BRWSTR N75A	1260	12,500
	6	dsl	1260	BRWSTR N75A	1260	12,500
	1	dsl	1800	EMSCO C Type III	1800	18,000/5"
	9	dsl	2100	EMSCO A1100	2100	18,000/5"
Magee-Poole Drig	3	dsl	940	CABOT/FRANKS 750	608	9,000/4"
Matagorda Marine Drig	11	dsl	2600	NATL 110	2000	18,000
Penrick Drig	103	dsl-elec	2200	BRWSTR NE46	900	14,000
Penrod Drig	124	dsl	1600	NATL 1625M	3000	30,000
Richards Drig	9	dsl-elec	3400	OILWELL E3000	3000	30,000
Sundown Drig	8	dsl	600	BRWSTR N42	550	11,000
EASTLAND						
Bandera Drig	4	dsl	750	BDW 450T	540	8,500
	1	dsl	750	MAC 300	475	7,500
Brunner Drig	7	dsl		Wichtex	350	5,000
J & W Drig	3	dsl	280	WILSON Mogul 42	440	6,000
	2	gas	180	IDECO 150	180	3,500
	1	gas-dsl	180	Harris 5000	340	5,000
Wes-Mor Drig	2	dsl		M-CSCO U34		6,000
	11	dsl		WILSON Roadair		6,000
ECTOR						
Atco Drig Southern	15	dsl	1050	IDECO H35	350	7,000
BJM Drig & Expl	2	dsl	800	UNIT U34	800	8,000
Cactus Drig Co	65	dsl	520	BRWSTR N4	454	6,000
Cherokee Drig & Dev	6	dsl		BDW 450	670	7,000
D & R Drig	1	steam	1800	NATL 3410FE	1700	14,000
	2	steam	2000	EMSCO EFP	1700	20,000
Delta Drig	98	dsl	1500	WILSON Giant Roadair	784	12,500
Hillin Drig	9	dsl	600	IDECO H40	600	8,000
Hurt & Assoc, Clint	11	dsl	1200	WILSON 75	900	11,000
John Drig	5	dsl	700	M-CSCO U15	700	8,500
Kenai Drig of New Mexico	10	dsl	365	EMSCO GA250T	425	6,500
Kenai Drig of Texas	15	dsl	600	EMSCO GB500	800	11,000
	20	dsl	500	EMSCO GB250T	400	6,500
Norwood, A N	2	dsl	700	BRWSTR N4	450	6,000
	4	dsl	600	NATL T20	450	6,000
	3	gas	1000	BRWSTR N4	450	6,000
Price & Co, J A	3	dsl	1000	GAR-DEN Model 3000	370	5,000
R Rigs Inc	3	dsl	375	MAC 400	400	8,500
Rod Ric	11	dsl	450	NATL T20	440	5,000
Sharp Drig	370	dsl-elec	1488	UNIT U712EC	1995	18,000
	73	dsl-elec	4250	EMSCO C3	4640	30,000
Sterling Drig (TX)	4	dsl	1075	NATL 50A	900	12,000
	3	dsl	800	NATL 50CA	820	10,000
	22	dsl	1520	NATL 610	1100	13,000
TMBR Drig	1	dsl	350	M-CSCO U15CA	500	6,000
Warton Drig	2	dsl	970	NATL 50A	1100	11,000
ERATH						
I X Drig	1	dsl	950	EMSCO G500	950	8,500
FAYETTE						
Atco Drig Southern	55	dsl	2000	NATL 80UE	1000	15,000
	18	dsl-elec	2000	NATL 80UE	1000	15,000
Badger Expl	3	dsl	900	KREMCO 1000	900	13,000
Cinco Drig	9	dsl	1700	Beth 650	1100	16,000
Diamond M Land Drig	172	gas	1750	NATL 110M	2550	16,000
Eltex Drig Contractors	258	dsl	615	BRWSTR N75	1230	13,500
Louise Drig	1	dsl	2684	IDECO H40	1006	11,000
Resource Drig	4	dsl	1560	NATL 80B	1835	14,000
Rio Colorado Drig	139	dsl	1200	NATL T45	900	10,000
	138	dsl	1750	IDECO H1000	1000	11,000
South Texas Drig	5	dsl	500	BRWSTR N45	500	8,000
Sterling Drig (TX)	5	dsl	1230	NATL 50CA	820	11,000
	19	dsl	1110	BRWSTR N46	770	11,000
	15	dsl	1400	BRWSTR N75	1100	14,000
	1	dsl	900	NATL 50A	900	12,000
	16	dsl	1400	BRWSTR N75	1230	14,000
	7	dsl	850	NATL 50A	900	12,000
FISHER						
F-W Drig	7	dsl	600	BRWSTR N4	500	7,000
Lynx Drig	4	dsl	750	TSM-6000	540	9,000
Wes-Tex Drig	19	dsl	600	BRWSTR N4	600	8,000
FOARD						
F-W Drig	4	dsl	500	M-CSCO U34	500	7,000
FORT BEND						
B D K Drig	8	dsl	1000	BRWSTR 4610	750	10,000
Bawden Drig, Peter (TX)	5	mech	2000	NATL 110M	1500	18,000
	26	mech	1550	OILWELL 76	700	13,000
Eltex Drig Contractors	101	dsl	615	EMSCO D2	1230	12,500
Penrick Drig	101	dsl-elec	2000	NATL L130	2000	20,000
Woolf & Magee	11	dsl	650	BETH S45E	500	9,500

TEXAS (Cont'd)

Contractor	Rig No.	Type Power	Total HP All Main Mud Pumps	Drawworks Make and Model	Total HP Avail-able to Drwwks	Rated Depth with 4½" Pipe
FREESTONE						
Bawden Drig, Peter (TX)	4	elec-scr	2000	NATL 80UE	1000	14,000
Eagle Prod & Drig Serv	5	dsl-elec	2000	OILWELL E2000	2000	25,000
France Drig	8	dsl	2400	OILWELL 760E	2400	17,000
FWA Drig	28	dsl	2700	GAR-DEN 1100M	1560	18,000
	27	dsl	2000	GAR-DEN 800M	1560	15,500
Globe Drig	7	dsl	3000	GAR-DEN 1100	1500	20,000
	6	dsl	700	EMSCO C50	700	10,000
Hinton Drig, W B	7	dsl	1600	NATL 80B	1650	15,000
Justiss Oil	30	dsl	1000	BETH 1013	1400	17,000
O'Neal Drig	15	dsl-elec	2000	GAR-DEN 800	1500	18,000
	14	dsl	15000	NATL 80B	1500	15,000
Rainbow Drig	6	dsl	1600	CABOT/FRANKS 900	900	11,000
Tricon/B-E Drig	2	dsl	1200	NATL 55	1200	12,000
	3	dsl	900	All Rig 900	900	12,000
FRIO						
Cactus Drig Co	61	dsl	520	NATL T20	460	6,000
	62	dsl	520	IDECO H35	454	6,500
F & N Drig	1	dsl	525	Kremco K600	600	8,000
GAINES						
BJM Drig & Expl	6	dsl	1200	UNIT U15	1000	12,000
Cactus Drig Co	72	dsl	520	NATL T20	454	6,000
	66	dsl	520	BRWSTR N4	454	6,000
Cactus Drig Corp	15	dsl	1200	BETH 650	1200	15,000
Cherokee Drig & Dev	5	dsl	900	BDW 450	531	7,000
Edsco Drig	2	dsl	425	Wlkr-Nr 25040	425	6,000
Hillin Drig	3	dsl	500	BDW 450T	575	7,500
Hondo Drig	9	dsl	900	BRWSTR N45	700	10,000
Republic Drig & Serv	10	dsl-elec	2000	OILWELL 700E	1000	14,000
Rod Ric	8	dsl	670	BRWSTR N45	600	8,000
	10	dsl	670	EMSCO G500	600	8,500
	7	dsl	900	Wgnr-Mrhse Helihoist	900	10,000
	3	dsl	670	BRWSTR N45M	820	9,000
TMBR Drig	3	gas	700	NATL 50	700	10,500
Willbros Drig	8	dsl	800	UNIT U15	800	11,000
	3	dsl	800	UNIT U15	800	11,000
GALVESTON						
Richards-Armstrong	7	dsl	1900	CABOT/FRANKS 1000	900	12,500
GLASSCOCK						
Hondo Drig	2	dsl	1050	BRWSTR N55	700	10,000
M G F Drig-Midland	10	dsl	900	BETH M56	900	12,000
Matagorda Drig	14	dsl	2600	NATL 110	2000	18,000
Matagorda Marine Drig	12	dsl	2000	NATL 80B	1500	15,000
Rosamond Drig	5	dsl	1450	BETH MC450	1275	13,500
Sterling Drig (TX)	21	dsl	1180	BRWSTR N46	770	11,000
Tri-Service Drig	4	gas-btne	700	OILWELL 66	700	10,000
TMBR Drig	25	dsl	700	GAR-DEN 500	700	11,000
Wes-Tex Drig	11	dsl	450	BETH S55	700	10,000
Willbros Drig	2	gas	1150	WILSON Giant	840	10,000
GOLIAD						
J 3 Drig	3	dsl	1100	UNIT U34B	750	8,500
Resource Drig	15	dsl	1560	NATL 80B	1835	14,000
GONZALES						
Badger Expl	5	dsl	700	NATL 370	700	10,000
Challenger Drig	36	dsl	650	NATL G45	700	9,500
Cinco Drig	2	dsl	890	NATL T32	850	8,000
	4	dsl	1005	BRWSTR N45	780	8,500
I X Drig	9	dsl	850	Shaevco	650	10,000
Ladrido Drig	2	dsl	1000	UNIT U15	1050	12,000
	3	dsl	1350	UNIT U15	1050	12,000
Williams Drig of South TX	4	dsl	800	IDECO BIR8085	950	11,500/4"
GRAY						
Hudson Drig, Leonard	4	dsl	900	UNIT U15	900	11,500
	7	dsl	900	UNIT U15	900	11,500
Service Drig (OK)	11	dsl	400	UNIT RU34	400	5,500
GRAYSON						
Guffey-Schlensker Drig	1	dsl	700	UNIT U36A	933	11,000
Henley Drig	220	dsl	1200	CABOT/FRANKS 900	900	10,000
Jones Drig Corp	14	dsl	1200		1200	14,000
Moran Drig, E W	15	dsl	950	BETH S55	550	10,000
	3	dsl	1300	GAR-DEN	800	14,000
Schlensker Drig	8	dsl	635	WILSON Mogul 42	475	7,000
	4	gas	700	UNIT U15	800	10,000
	1	gas	700	NATL 75CA	1050	14,000
Viersen & Cochran Drig	19	dsl	800	NATL 610	830	12,000
GREGG						
Delta Drig	69	dsl		Spencer 7000	480	9,000
Dixon Drig	7	dsl	1700	BRWSTR N46	950	12,500
Globe Drig	5	dsl	850	OILWELL 76	1000	14,000
Justiss Oil	32	gas-btne	700	BETH 450	900	12,000

TEXAS (Cont'd)

Contractor	Rig No.	Type Power	Total HP All Main Mud Pumps	Drawworks Make and Model	Total HP Available to Drwwks	Rated Depth with 4½" Pipe
GREGG (Cont'd)						
McMurrey Petr	1	dsl	800	Spencer	750	10,000
Transcontinental Drlg-San Angelo	95	dsl	750	GAR-DEN 500	750	12,000
GRIMES						
Chapman Drlg	401	dsl-elec	1000	BDW 800MX	1000	14,100
	203	dsl-elec	2600	BRWSTR NE95	1700	19,000
Rio Grande Drlg	8	dsl	550	NATL 370	770	10,000
GUADALUPE						
Nixon Drlg	3	dsl	300	Crdwll	300	4,000
	2	dsl	300	Crdwll	300	4,000
HANSFORD						
Baker & Taylor Drlg	10	dsl	870	M-CSCO U15	870	11,000
Jones Drlg Co, Loyd	88	dsl	1200	CABOT/FRANKS 750	750	10,000
Midco Drlg	3	dsl	750	UNIT 750	750	13,000
HARDEMAN						
Bearden Drlg, Jack E	8	dsl	1200	WILSON 75	900	9,500
Bennett Prod Corp	4	dsl	900	Permian 1000	900	13,000
	3	dsl	900	UNIT R15	900	13,000
Burns L D Drlg	6	dsl	1360	UNIT U36A	780	14,000
C M D Drlg	1	dsl	400	WILSON Mogul 42	400	7,000
Crawford Drlg	2	dsl	600	M-CSCO U15	800	10,000
	4	dsl	600	M-CSCO U15	800	10,000
	11	dsl	600	NATL 50A	800	11,000
	10	dsl	800	EMSCO GB800	800	14,000
	5	dsl	600	M-CSCO U15	800	10,000
	6		600	M-CSCO	800	10,000
	7	dsl	600	M-CSCO U15	800	10,000
	9	dsl	350	WILSON Roadaire	350	7,000
	8	dsl	350	OILWELL 64B	350	9,500
	1	dsl	350	M-CSCO U15	800	8,500
	3	dsl	350	WILSON Giant	350	6,500
Highbridge Drlg	33	dsl	950	UNIT U15	900	11,500
	32	dsl	950	UNIT U15	850	11,000
Lee Drlg	2	dsl	850	BDW 450T	550	9,000
	3	dsl	1100	BDW 450T	700	9,000
Moran Drlg, E W	23	dsl	1400	WILSON 75	900	11,000
	18	dsl	860	Spencer 7000	450	9,500
	19	dsl	1200	WILSON 75	900	11,000
Theiss Drlg	1	dsl	900	BRWSTR H46	900	10,000
HARDIN						
Big 6 Drlg	8	dsl	800	CABOT/FRANKS	950	12,000
Challenger Drlg	47	dsl	700	GAR-DEN 500	600	8,000
	21	dsl	900	BRWSTR N75	1000	12,000
Delta Drlg	15	dsl	1800	EMSCO D3 Type III	1040	13,500
Dixilyn-Field Drlg	3	dsl	1300	BRWSTR N75	1020	12,000
Glasscock Drlg	62	dsl	2000	NATL 110	1700	16,000
Helmerich & Payne Intl Drlg	79	dsl-scr	2200	NATL 110UE	1500	20,000
Loffland Bros	322	dsl	1800	GAR-DEN 800	2100	16,000
M G F Drlg-Houston	32	dsl	750	NATL 610	800	12,000
Pozos Intl Drlg Serv	81	dsl	1890	BRWSTR N46	940	12,500
Richards Drlg	8	dsl	2500	OILWELL 860	2400	18,000
Stone Drlg, M L	2	gas	300	WILSON Jr	100	2,000
	8	dsl	350	WILSON Super	200	3,000
	6	gas-btne	100	Cooper-Small	100	
HARMON						
Lin-Mour Drlg	2	gas	380	EMSCO G350	380	6,500
HARRIS						
Bailey Drlg, Pernie	21	dsl	500	EMSCO J750	800	11,000
Big 6 Drlg	2	dsl	800	CABOT/FRANKS	600	10,000
Blocker Drlg-Houston	47					20,000
Challenger Drlg	26	dsl	30	NATL T20	600	5,000
Delta Drlg	90	dsl-elec	2000	EMSCO D3 Type II	2592	16,000
Diamond M Land Dirg	173	dsl-elec	2700	M-CSCO 914EU	3000	16,000
Diamond M Land Drlg	175	dsl	2000	M-CSCO 1220	2000	25,000
Drillers	S-1	dsl-hydra	400	Shaft CSD620	400	1,000/8.63"
Richards-Armstrong	6	dsl	2500	OILWELL 860	2400	18,000
Rio Colorado Drlg	141	dsl	1200	NATL T45	900	10,000
T-L Drlg	10	dsl	2000	BRWSTR N75	1200	12,500
HARRISON						
Butler-Johnson	13	dsl	1200	BRWSTR N75B	1200	13,000
Exeter Drlg Southern	45	dsl	2000	GAR-DEN 700	1000	12,500
Gibson Drlg	2	dsl	528	WILSON Mogul 65	398	5,000
Justiss Oil	33	dsl	1000	OILWELL 96	1400	17,000
	10	dsl	500	BRWSTR N45	600	10,000
Lohmann Drlg	5	dsl	300	NATL 50	440	4,500
Noble Drlg	N-59	dsl	800	NATL 55	800	12,000
Sawyer Drlg & Serv	15	dsl	800	UNIT U40D	800	14,000
HASKELL						
Dixon Drlg	8	dsl	900	BRWSTR N42	650	8,000
Hack Drlg	3	dsl	350	BETH S45E	350	7,000
Sojourner Drlg	6	dsl		M-CSCO U15	550	7,000
Wes-Mor Drlg	12	dsl	2500	UNIT U15	2500	9,000

TEXAS (Cont'd)

Contractor	Rig No.	Type Power	Total HP All Main Mud Pumps	Drawworks Make and Model	Total HP Available to Drwwks	Rated Depth with 4½" Pipe
HEMPHILL						
Baker & Taylor Drlg	12	dsl	870	M-CSCO U15	870	11,000
	4	dsl	1140	M-CSCO U20	1140	18,000
	5	dsl	1400	M-CSCO U20	1400	22,000
	11	dsl	1140	EMSCO GCA500	1140	12,000
	14	dsl	1140	M-CSCO U40	1140	18,000
Eason Oil	21	dsl-elec	2000	EMSCO D2	750	13,000
Helter Skelter Drlg	1	dsl	1000	BRWSTR N46	950	10,000
Hickman Drlg	6	dsl	1450	BDW 800	1100	15,000
King Drlg	1	dsl	1177	Crdwll 700	800	12,000
	9	dsl	1177	Crdwll 700	800	12,500
Midco Drlg	1	dsl	680	UNIT U15	680	9,000
Moran Drlg, E W	13	dsl	1400	GAR-DEN 700	800	13,000
	29	dsl	1400	GAR-DEN 700	800	13,000
Pulliam Drlg	11	dsl	2400	NATL 80B	1600	15,000
Robinson Bros Drlg	1	dsl	1750	BRWSTR N75	1500	12,000
	16	dsl	1500	GAR-DEN 1100E	1500	20,000
Spartan Drlg	9	dsl-elec	1000	Superior 1000UE	1000	16,000
Unit Drlg & Expl	19	dsl	700	GAR-DEN 500	800	13,000
	11	dsl	1100	GAR-DEN 700	1300	15,000
HENDERSON						
Delta Drlg	40	dsl	1500	EMSCO D2 Type III	784	11,000
Henley Drlg	6	dsl	2580	EMSCO D3	1720	14,000
Lohmann Drlg	17	gas	800	M-CSCO U15 SN356	600	10,000
Schlensker Drlg	5	dsl	950	UNIT U15	950	10,000
HIDALGO						
Alanco Drlg	3	dsl	1425	IDECO H1000	975	11,000
Chapman Drlg	102	dsl-mech	2000	OIME SL7	1000	12,500
Delta Drlg	94	dsl-scr	2000	EMSCO D3 Type II	2592	16,000
Dixilyn-Field Drlg	23	dsl	2800	OILWELL 860	2331	18,000
	18	dsl	2245	UNIT U914C		20,000
	9	dsl	2650	NATL 130	2331	25,000
	12	dsl	2600	NATL 110M	2331	18,000
F-W Drlg	11	dsl	750	BRWSTR N46	800	12,000
	16	dsl	1000	BRWSTR N46	800	13,000
Flournoy Drlg	9	dsl	900	EMSCO C50	480	9,000/4"
	8	dsl	800	IDECO BIR800	950	10,000
Harkins & Co	7	dsl	1650	NATL 110	1650	16,000/5"
Magee-Poole Drlg	6	dsl	2000	OIME SL7	1300	16,800
Southland Drlg	7	dsl	650	BRWSTR N55	600	10,000
	10	dsl	1800	BETH 810	1600	17,000
Willis Drlg	8	dsl	1600	BDW 800	1100	12,000
	5	dsl	800	M-CSCO U15	800	10,000
	6	dsl	3000	IDECO	3000	25,000
	7	dsl	2500	BRWSTR N95	2500	18,000
	2	dsl	1000	BETH B-Line MC450	1000	12,000
HILL						
Verna Corp	29	dsl	1000	M-CSCO U15	600	10,000
HITCHCOCK						
Eagle Prod & Drlg Serv	10	dsl-elec	1600	NATL 80UE	1600	16,000
HOCKLEY						
Cactus Drlg Co	54	dsl	520	BETH S55	454	6,500
Cactus Drlg Corp	34	dsl	1200	NATL 75	1200	11,500
Chico Drlg	1	dsl	1100	BDW 650M	878	12,500
	4	dsl	1000	UNIT U15A	878	11,000
	3	dsl	1300	EMSCO D2	1240	14,000
D B Drlg	3	dsl	675	BRWSTR N4	480	7,000
	10	dsl	675	BRWSTR N4	480	7,500
Norton Drlg	1	dsl	450	WILSON 65P	850	10,000
	5	dsl	550	WILSON 75	850	10,500
	3	dsl	475	WILSON 75	850	10,500
	9	elec	1350	GAR-DEN 110E	1500	20,000
Rod Ric	9	dsl	750	IDECO H35	600	8,000
Sitton Drlg	2	dsl	650	WILSON 75P	900	11,500
	4	dsl	650	WILSON 75P	900	10,000
Verna Corp	3	dsl	500	BRWSTR N45	500	6,500
	9	dsl	600	IDECO H40	500	6,500
	8	dsl	500	IDECO H40	500	6,500
HOPKINS						
Verna Corp	24	dsl	550	M-CSCO U15	600	10,000
HOUSTON						
Atco Drlg Southern	59	dsl-elec	2600	EMSCO 11C	2000	18,000
Bawden Drlg, Peter (TX)	15	dsl-scr	1600	NATL 610E	750	12,000
Helmerich & Payne Intl Drlg	87	dsl-el-scr	800	NATL 1625ME	3000	30,000
M G F Drlg-Houston	38	dsl	1600	EMSCO C1	1200	17,000
Resource Drlg	19-RD	dsl	1040	NATL 610	1220	12,000
Westburne Drlg Canada	72	dsl	870	NATL T32	360	7,500
	55	elec-scr	3310	NATL 1320UE	3310	22,000
HOWARD						
Cherokee Drlg & Dev	2	dsl	1150	WILSON 75	900	1,100
Corky Drlg	1	dsl	325	Crdwll 350	350	6,000
D B Drlg	24	dsl	720	UNIT U15	720	11,000
GCO Drlg	8	dsl	1000	NATL 370	650	9,500
	4	dsl	1200	BDW 650M	650	10,000
Hurt & Assoc, Clint	9	dsl	1300	WILSON 75	900	11,000
R Rigs Inc	1	dsl	350	GAR-DEN 3000	350	6,000

TEXAS (Cont'd)

Contractor	Rig No.	Type Power	Total HP All Main Mud Pumps	Drawworks Make and Model	Total HP Available to Drwwks	Rated Depth with 4½" Pipe
HOWARD (Cont'd)						
Riley Drlg	3	dsl	300	M-CSCO U34	225	4,000
	2	dsl	300	NATL	300	4,500
Robinson Drlg of Texas	3	dsl	750	M-CSCO U15	900	10,000
	5	dsl	750	M-CSCO U15	900	9,500
Safari Drlg	5	dsl	370	EMSCO GA250T	280	5,000
Wes-Tex Drlg	16	dsl	335	BRWSTR N4	500	8,000
HOWARD & MITCHELL						
Fiscus Drlg	1	dsl	350	WILSON Super 385	200	3,200/4"
HUTCHINSON						
Mercury Drlg	4	dsl	750	EMSCO Unit U15	980	12,000
Service Drlg (OK)	7	dsl	300	BETH S45	900	6,000
Service Drlg (TX)	6	dsl	300	M-CSCO U34	300	4,500
	1	dsl	300	M-CSCO U34	300	4,500
	7	dsl	300	BETH S45	300	5,500
IRION						
D B Drlg	8	dsl	830	BETH S55	700	10,000
	9	dsl	830	UNIT U34	530	7,500
	5	dsl	675	BRWSTR N4	540	7,500
Mellon Drlg	2	dsl	1300	EMSCO GB350	750	10,000
	1	dsl	750	EMSCO GB250	570	7,800
Tucker Drlg	9	dsl	750	NATL	750	10,000
JACK						
E & H Drlg	1	dsl	700	M-CSCO U15	700	7,500
	5	gas-LPG	550	WILSON Giant	550	7,500
Megargel Drlg	2	dsl	750	UNIT Double Jacknife U15	750	7,000
Originala Drlg	2	dsl	400	WILSON Giant	400	7,000
	1	dsl	400	WILSON Super 38	400	6,000
	3	dsl	400	NATL 50A	400	8,500
Simmons Drlg	46	dsl	350	Troy M600	350	7,500
JACKSON						
FWA Drlg	24	dsl	1350	WILSON Mogul 42	720	11,000
G-E Drlg	6	dsl	1200	NATL 50CA	900	10,100
Howell Drlg	1	dsl	1000	CABOT/FRANKS 900	900	11,000
JASPER						
Blocker Drlg-Alice	7	dsl	1400	CABOT/FRANKS Series 900	950	10,000
Glasscock Drlg	73	dsl	1000	NATL 110M	1500	18,000
Goldrus Drlg	21	dsl	1200	CABOT/FRANKS 1000	872	13,500
Henley Drlg	8	dsl	2580	EMSCO D3	1720	14,000
JEFFERSON						
Bawden Drlg, Peter (TX)	3	elec-scr	2100	NATL 110E	1500	16,000
Chapman Drlg	202	dsl-elec	2600	BRWSTR NE95	1700	19,000
Cliffs Drlg	29	dsl	2600	NATL 110	2475	20,000
Delta Drlg	6	dsl	2600	EMSCO C1 Type III	2592	22,000
France Drlg	2	dsl	1700	OILWELL 760	1700	17,000
Goldrus Drlg	19	dsl	1110	CABOT/FRANKS 750	580	10,000
Loffland Bros	110	dsl	2160	BRWSTR N12	2400	20,000
Matagorda Marine Drlg	16		750	M-CSCO U36A	820	12,000
Richards Drlg	11	dsl	2500	OILWELL 860	2400	18,000
JIM HOGG						
Challenger Drlg	46	dsl	900	IDECO 750	900	10,000
Dixilyn-Field Drlg	24	dsl	2500	OILWELL 860	2331	18,000
Eagle Prod & Drlg Serv	2	dsl-elec	2000	OILWELL E2000	2000	25,000
Magee-Poole Drlg	12	dsl	1500	CABOT/FRANKS 900	950	11,000/4"
JIM WELLS						
Blocker Drlg-Alice	2	dsl	1130	CABOT/FRANKS Series 750	650	9,500
	16	dsl	1080	CABOT/FRANKS Explorer III	950	12,000
	14	dsl	2900	NATL 110	2730	20,000
	9	dsl	1115	IDECO H1000	950	10,000
	8	dsl	1820	CABOT/FRANKS Expl 111 1200	1400	14,000
	3	dsl	1820	CABOT/FRANKS Expl Rocket 111	950	12,000
	4	dsl	1800	NATL 55	1500	12,000
Dixilyn-Field Drlg	6	dsl	2000	UNIT 914-B	1536	20,000
	14	dsl	2200	OILWELL 840E	2000	20,000
Flournoy Drlg	7	dsl	1775	OILWELL 76	1176	13,500
Murlynson Drlg	10	dsl	1000	M-CSCO U15	600	10,000
Murphy Drlg, Pete	1	dsl	800	Crdwll C Horse	300	6,000
Pearl Expl	2	dsl	600	WILSON 65	600	8,500
	1	dsl	600	WILSON Model 65	500	7,000
JONES						
Dixon Drlg	11	dsl	700	NATL T20	450	7,500
	9	dsl	700	Spencer 5000 Port	450	6,000

TEXAS (Cont'd)

Contractor	Rig No.	Type Power	Total HP All Main Mud Pumps	Drawworks Make and Model	Total HP Available to Drwwks	Rated Depth with 4½" Pipe
KARNES						
Atco Drlg Southern	52	dsl	1500	M-CSCO U40	900	12,000
Delta Drlg	101	dsl-scr	2600	EMSCO C1 Type II	2730	20,000
San Patricio Corp	6	dsl	1500	Shaffer 800	900	13,000
Spur Drlg	2	dsl	2000	GAR-DEN 800	1000	17,000
KAUFMAN						
Little-Deutag	T-37	dsl	1600	Cooper LTO750	750	10,000
KENEDY						
Dixilyn-Field Drlg	8	dsl	1950	NATL 110	1638	16,000
Flournoy Drlg	5	dsl	1200	CABOT/FRANKS Rocket 1000	950	12,000
Harkins & Co	12	dsl	1050	CABOT/FRANKS 750	650	9,500/4"
	14	dsl	1150	CABOT/FRANKS 900	900	11,000/4"
Magee-Poole Drlg	8	dsl	1500	CABOT/FRANKS 900	950	11,000/4"
	5	dsl	1500	CABOT/FRANKS 900	950	11,000/4"
PRC Drlg	6	dsl	1790	BRWSTR N75A	1040	13,000
Southland Drlg	9	dsl	600	BRWSTR N45	600	7,500
KENT						
GCO Drlg	5	dsl	820	M-CSCO U15	850	9,000
Verna Corp	4	dsl	500	BRWSTR N4	500	6,500
KING						
Sojourner Drlg	10	dsl		M-CSCO U15	550	7,000
Wes-Mor Drlg	5	gas-btne	465	M-CSCO U15	290	7,500
	4	dsl	400	M-CSCO U15		7,500
KLEBERG						
Flournoy Drlg	10		1250	BRWSTR N46	820	12,500
	6	dsl	800	BRWSTR N45	600	9,000/4"
Magee-Poole Drlg	10	dsl	1500	CABOT/FRANKS 900	950	11,000/4"
Penrick Drlg	105	dsl	1300	CABOT 550	800	8,000
	104	dsl-elec	2200	BRWSTR DH14610A	900	12,000
Southland Drlg	5	dsl	700	BRWSTR N55	700	10,000
Willis Drlg	1	dsl	1000	BETH B-Line MC450	1000	12,000
LA SALLE						
Sundown Drlg	7	dsl	475	EMSCO GB250	475	7,500
LAMB						
Norton Drlg	2	dsl	450	WILSON Mogul 42	650	7,000
LAREDO						
PRC Drlg	8	dsl	770	BRWSTR N95A	777	20,000
LAVACA						
Culver Drlg	11	dsl	1500	M-CSCO U914C	1500	17,000
FWA Drlg	18	dsl	1150	WILSON Giant	360	7,500
Howell Drlg	2	dsl	1550	CABOT/FRANKS 1200	1130	15,000
M N D Drlg-Southern	3	dsl	1794	BRWSTR N75	1024	12,500
Resource Drlg	14	dsl	2330	NATL 110	2740	18,000
Southland Drlg	11	dsl	2300	M-CSCO A1500	2300	24,000
LEA						
Cactus Drlg Co	69	dsl	820	NATL 370	670	9,000
LEE						
Explorer Drlg	30	dsl	2000	BRWSTR TR800	1400	20,000
H S Energy/Senior Drlg	40	dsl	1500	CABOT 1200 Model 2550	1300	13,500
Hondo Drlg	8	dsl	1100	BRWSTR N45	700	12,000
M G F Drlg-Midland	6	dsl	750	NATL T32	750	9,000
	7	dsl	850	BRWSTR N55	850	12,000
	8	dsl	800	M-CSCO Rig U15	800	10,000
Republic Drlg & Serv	5	dsl-elec	1200	OILWELL 760E	1000	14,000
Spartan Drlg	6	dsl-elec	600	Superior 700UE	750	10,000
	7	dsl-elec	600	Superior 700UE	750	10,000
	4	dsl-elec	600	Superior 700UE	750	10,000
Sterling Drlg (TX)	18	dsl	1250	NATL 610	1100	13,000
	12	dsl	1500	NATL 610	1100	13,000
LEON						
Cape Drlg	1	dsl	650	WILSON 42 Mogul	500	8,500
Delta Drlg	80	dsl	1300	Spencer 7000	480	9,000
	5	dsl	2000	NATL 100	1560	16,000
Duai Drlg	7	dsl	3400	NATL 1320M	2000	25,000
Eljay Drlg	2	dsl-scr	2800	OILWELL E2000	2000	25,000
Henley Drlg	7	dsl-elec	2600	EMSCO C2	2000	25,000
Hinton Drlg, W B	11	dsl-elec	2600	NATL 1320UE	3000	25,000
Justiss Oil	36	dsl	1000	1013	1200	16,000
	25	dsl	250	EMSCO GC350	450	12,000
Murco Drlg	2	dsl	2200	OILWELL 760E	1000	15,000
Schlensker Drlg	3	dsl	700	OILWELL 760	1500	14,000
	20	dsl	1270	NATL 75CA	1270	14,000
Tesoro Drlg	4	dsl	2600	NATL 1320M	2742	25,000

TEXAS (Cont'd)

Contractor	Rig No.	Type Power	Total HP All Main Mud Pumps	Drawworks Make and Model	Total HP Available to Drwwks	Rated Depth with 4½" Pipe
LIBERTY						
Diamond M Land Drlg	171	dsl	1300	M-CSCO Unit 712	1200	14,500
Eagle Prod & Drlg Serv	11	mech	250	Trailer Mounted		6,000
	8	dsl-elec	600	OILWELL E500	700	10,000
LIMESTONE						
M N D Drlg-Southern	5	dsl	1536	BRWSTR N95	1536	18,000
	12	dsl-elec	1820	M-CSCO U712	1200	16,000
LIPSCOMB						
Hudson Drlg, Leonard	2	dsl	900	UNIT U15	900	11,500
	3	dsl	900	UNIT U15	900	11,500
Robinson Bros Drlg	2	dsl	600	OILWELL 66	1000	11,500
	19	dsl	600	OILWELL 52T	3000	8,000
	12	dsl	800	GAR-DEN 700	1000	12,000
Service Drlg	13	dsl	400	UNIT U1500	800	12,000
Service Drlg (OK)	13	dsl	1100	UNIT RU34	900	12,000
Service Drlg (TX)	9	dsl	1000	M-CSCO 800	800	10,000
Unit Drlg & Expl	3	dsl	700	NATL 50A	800	11,000
Zenith Drlg	3	dsl	800	BRWSTR N75	800	10,000
LIVE OAK						
Bawden Drlg, Peter (TX)	30	dsl-mech	1850	EMSCO D3 Type III	1000	15,000
Buzzini Drlg	9	dsl	3600	OILWELL M2000	2400	20,000
Dixilyn-Field Drlg	19	dsl	1925	NATL 130	2331	20,000
F-W Drlg	10	dsl	1000	IDECO H1200	1000	16,000
Frio Drlg	5	dsl-elec	1000	IDECO ED1200	1200	16,000
FWA Drlg	25	dsl	2000	WILSON 120	1560	16,000
Harkins & Co	10	dsl	1620	EMSCO B1013	1620	16,000
	5	dsl	950	CABOT/FRANKS 750	650	9,500/4"
	11	dsl	1260	BRWSTR N75	1260	12,500
J & C Drlg	9	dsl	1050	WILSON 600	630	9,000
J 3 Drlg	5	dsl	2470	UNIT U914	2470	20,000
Loffland Bros	88	dsl-elec	2160	M-CSCO U712	2400	16,000
Magee-Poole Drlg	2	dsl	1500	OIME 750SL	1155	14,000
Nicklos Drlg	77	dsl-elec	1600	EMSCO C111	1530	16,000
Penrod Drlg	16	dsl	3075	BRWSTR N12A	1840	20,000
San Patricio Corp	7	dsl	1000	BRWSTR RR600	400	8,000
South Texas Drlg	7	dsl	910	IDECO H1200	1200	15,000
Southland Drlg	12	dsl	2300	M-CSCO 1500A	2300	24,000
Spur Drlg	1	dsl	1400	Superior 1000	1000	12,000
LOVING						
Ard Drlg	8	dsl	1900	EMSCO 800GB	1800	16,000
Cactus Drlg Co	64	dsl	520	BRWSTR N45	670	7,500
Cactus Drlg Corp	30	dsl	1650	NATL 110	1650	23,000
	2	dsl	2550	EMSCO A1500	2550	23,000
Delta Drlg	60	dsl-elec	1825	EMSCO D3 Type II	2592	16,000
Henley Drlg	2	dsl-elec	2600	EMSCO C2	2000	25,000
Loffland Bros	117	dsl-elec	3300	M-CSCO U1220EBD	3300	25,000
	37	dsl-elec	2160	M-CSCO U914B	2400	20,000
M G F Drlg-Midland	201	dsl	1600	NATL 1320UE	2000	30,000
	203	dsl	1300	NATL 110UE	2000	20,000
	202	dsl	1600	NATL 1320 UE	2000	30,000
Parker Drlg	39	gas	1600	OIME Hercules 2500M	1600	23,000
	198	gas	1600	OIME 1500	1600	22,000
	184	gas-scr	3000	OIME G3000	3000	30,000
Rowan Drlg US	8	dsl	2600	M-CSCO U1220S	2400	25,000
Santa Fe Drlg Western	6	dsl-elec	2600	EMSCO C111	2700	30,000
Sharp Drlg	55	dsl	2321	GAR-DEN 2100	2742	30,000
	43	dsl	2331	OILWELL M2000	2742	30,000
	61	dsl	2331	M-CSCO U914C	2742	23,500
Verna Corp	13	dsl	600	BRWSTR N4	400	6,500
Wilbros Drlg	9	dsl-el-scr	3000	IDECO E1700	3000	25,000
LUBBOCK						
D B Drlg	1	dsl	720	BRWSTR N4	540	7,500
Norton Drlg	4	dsl	550	WILSON 75	850	10,500
Sitton Drlg	8	dsl	650	WILSON 75P	900	10,000
Verna Corp	33	dsl	550	M-CSCO U15 Type	800	9,000
McCLAIN						
Moran Drlg, E W	1	dsl	1700	GAR-DEN 700	800	15,000
McCOOK						
Marlin Drlg (TX)	8	dsl	1600	NATL 80UE	1000	14,000
McMULLEN						
B D K Drlg	4	dsl	1095	BRWSTR N7	870	11,500
Cinco Drlg	12	dsl-elec	3000	NATL 1320UE	2400	24,000
Delta Drlg	89	dsl-scr	2000	EMSCO D3 Type II	2592	16,000
F-W Drlg	17	dsl	1000	EMSCO D2	1100	13,000
Flournoy Drlg	2	dsl	800	EMSCO C50	480	9,000/4"
Harkins & Co	13	dsl	1477	CABOT/FRANKS 1000	1000	12,000
Magee-Poole Drlg	7	dsl	1130	CABOT/FRANKS 750	608	9,000/4"
Resource Drlg	5	dsl	2330	NATL 110	2740	18,000
MADISON						
FWA Drlg	26	dsl	2000	GAR-DEN 800M	1560	14,000
Nicklos Drlg	78	dsl	1400	NATL 80B	1080	14,000
	76	dsl-elec	2600	NATL 1320UE	1800	25,000
Penrod Drlg	125	dsl	1000	NATL 80B	1760	15,000
Republic Drlg & Serv	8	dsl-elec	1000	IDECO 725E	1000	11,000
United Drlg Div	11	dsl	1100	NATL 370	800	10,000
	6	dsl	1200	BETH M58	800	13,000
	5	dsl	1200	BRWSTR N75	1200	15,000
Verna Corp	35	dsl	1000	IDECO 711SJ	1200	14,000
	37	dsl	1212	M-CSCO U15	550	11,000
MARION						
Explorer Drlg	8	dsl	1836	IDECO H1700	2000	15,000
Lester Drlg, Dan	9	dsl	1500	OILWELL 760	1500	15,000
Resource Drlg	RD-31	dsl	1560	NATL 80B	1635	14,000
MARSHALL						
Moran Drlg, E W	17	dsl	2000	WILSON 250	2000	22,000
MARTIN						
FWA Drlg	11	dsl	1065	WILSON Giant	900	11,000
	1	dsl	1300	WILSON Giant	900	11,000
	2	dsl	1100	WILSON Super Giant	1040	13,000
Tahoe Drlg	2	dsl	800	EMSCO D1	800	10,000
	1	dsl	900	NATL 50CA	1000	11,000
	3	dsl	1000	EMSCO D2	1200	13,500
TMBR Drlg	13	dsl	700	M-CSCO U15CA	500	10,500
Wes-Tex Drlg	4	dsl	650	EMSCO G500	650	1,000
MATAGORDA						
Bawden Drlg, Peter (TX)	31	dsl-scr	2000	NATL 110UE	1500	18,000
Big 6 Drlg	8	dsl-elec	1600	NATL 610	900	12,000
Chapman Drlg	152	dsl-elec	2000	DRECO 1000	1000	17,000
Dixilyn-Field Drlg	11	dsl	2600	NATL 110M	2331	18,000
	2	dsl	1300	NATL 610	1040	12,000
Matagorda Marine Drlg	18		750	M-CSCO U36A	820	12,000
Richards Drlg	4	dsl	1400	OILWELL 66	1200	10,500
Rosamond Drlg	6	dsl	1650	EMSCO A550	1275	14,000
Southland Drlg	1	dsl	700	EMSCO GB500	700	10,000
	16	dsl	1925	BRWSTR N12A	2200	17,000
MAVERICK						
Bearden Drlg, Jack E	6	dsl	1200	WILSON 75	900	9,500
Challenger Drlg	20	dsl	900	BRWSTR N75	1000	12,000
MENARD						
Bandera Drlg	6	dsl	600	UNIT 34	360	6,500
MIDLAND						
Brahaney Drlg	3	gas	900	NATL 75CB	900	12,000
	6	gas	1200	NATL 100	1200	15,000
	4	gas	1200	EMSCO J1000	1200	15,000
	8	gas	1400	OILWELL 96	1400	17,000
	1	gas	900	NATL 75CB	900	12,000
Britton Inds Drlg	1	dsl	1000	OILWELL 76	800	15,000
Cactus Drlg Co	32	dsl	1830	NATL 110	2700	20,000
Cactus Drlg Corp	32	dsl	2550	NATL 1320	2550	25,000
	33	dsl	2550	NATL 110	2550	20,000
	7	dsl	1650	OILWELL 76	1650	14,000
	31	dsl	2550	NATL 1320	2550	25,000
	4	dsl	1100	NATL 55	1100	13,000
	11	dsl	570	EMSCO C350	570	
Cherokee Drlg & Dev	7	dsl	1500	BDW 650	1050	12,000
Drilltech Inc	2	dsl	1000	GAR-DEN 500M	850	10,000
	1	dsl	1000	GAR-DEN 500M	850	10,000
FWA Drlg	17	dsl	1400	WILSON Giant	900	11,000
Hurt & Assoc, Clint	10	dsl	1200	WILSON 75	900	11,000
Ladrido Drlg	4	dsl	1200	J750	1050	14,000
Lanex Drlg	C-8	dsl-scr	1600	BDW 650	650	12,000
	C-11	dsl-scr	1600	BDW 800	800	16,000
	C-10	dsl-scr	1600	UNIT U36	650	12,000
M G F Drlg-Midland	3	dsl	500	NATL 32	400	7,000
Robinson Drlg of Texas	2	dsl	750	M-CSCO U15	900	10,000
Sharp Drlg	47	dsl	790	BETH M58	968	13,500
Tierra Drlg	6	dsl	850	BRWSTR N4	800	8,000
	23	dsl-elec	800	BDW 800	800	14,000
	9	dsl	650	UNIT U15	700	10,000
	15		1000	M-CSCO U712EA	1200	16,000
	11	dsl	650	BDW 650	700	12,000
	10	dsl	650	BDW 650	700	10,500
TMBR Drlg	20	dsl	350	IDECO H400	500	9,000
	4	dsl	840	NATL 50CA	600	10,500
MITCHELL						
D B Drlg	21	dsl	410	BRWSTR N4	420	7,500
R Rigs Inc	2	dsl	350	GAR-DEN 3000	350	6,000
Sojourner Drlg	1	dsl		M-CSCO U15	550	7,000
Wes-Tex Drlg	18	dsl	600	NATL 50CA	900	10,000
MONTAGUE						
Burns L D Drlg	4	dsl	888	WILSON 75	780	12,000/4"
Felderhoff Bros Drlg	3	dsl	600	MAC 400	350	7,500
Highbridge Drlg	30	dsl	800	UNIT U34B	400	7,000
Lin-Mour Drlg	21	gas-btne	650	UNIT 15	650	7,500

TEXAS (Cont'd)

Contractor	Rig No.	Type Power	Total HP All Main Mud Pumps	Drawworks Make and Model	Total HP Available to Drwwks	Rated Depth with 4½" Pipe
MONTAGUE (Cont'd)						
Maxwell Drlg	2	dsl		WILSON Giant		8,000
	3	dsl		NATL U34		6,000
	1	dsl		NATL U15		10,000
	4	dsl		NATL U15		10,000
	5	dsl		BETH M650		12,000
MONTGOMERY						
Chapman Drlg	153	dsl-elec	2000	RMI 1000E	1000	17,000
	106	dsl-mech	1700	BRWSTR Model N46	800	11,000
Cliffs Drlg	36	dsl	1700	EMSCO JB1250	1650	16,000
	33	dsl	2000	NATL 80B	1650	14,500
M N D Drlg-Southern	15	dsl-elec	2000	M-CSCO U712	1200	16,000
	6	dsl	1540	GAR-DEN 500	770	10,500
	9	dsl	1540	GAR-DEN 500	770	10,500
	7	dsl	1540	BDW 800	770	10,000
	2	dsl	1794	BRWSTR N75	1024	14,000
Pozos Intl Drlg Serv	581	dsl	3000	BRWSTR N12A	2650	25,000
T-L Drlg	2	dsl	2000	BRWSTR N75	1200	14,000
MOORE						
Diatom Drlg	1	dsl	456	Ingersoll 550	574	7,500
Service Drlg (OK)	6	dsl	300	UNIT RU34	300	5,500
NACOGDOCHES						
Atco Drlg Southern	53	dsl	1600	NATL 610UE	800	12,000
France Drlg	4	dsl	1300	GAR-DEN 500	800	11,000
Murco Drlg	6	dsl	2200	BRWSTR N95	1000	14,000
Schlensker Drlg	6	dsl	950	UNIT U15	950	10,000
Thunderbolt Drlg	50	dsl	1750	CABOT/FRANKS 1200	1300	13,500
NAVARRO						
Cape Drlg	5	dsl	400	Wlkr-Nr Apache 95040	425	6,000
Delta Drlg	44	dsl	2000	BRWSTR N95	1560	16,000
FWA Drlg	20	dsl	1700	WILSON Super Atlas	1040	14,000
NOLAN						
Bandera Drlg	10	dsl	775	MAC 300	475	7,500
Morrison Drlg & Prod	103	dsl	476	IDECO H35	550	8,500
Rio Colorado Drlg	136	dsl	1200	IDECO H40SP	600	8,000
Sojourner Drlg	5	dsl	250	M-CSCO U15	550	7,000
Transcontinental Drlg-San Angelo	34	dsl	674	BETH S55	650	8,000
Wes-Tex Drlg	12	dsl	335	BRWSTR N4	500	8,000
NUECES						
Alanco Drlg	1	dsl	800	IDECO H40	500	8,500
Buzzini Drlg	8	dsl	3600	OILWELL M2000	2400	20,000
Cinco Drlg	6	dsl	1015	M-CSCO U15	780	11,000
CRC Mallard Well	16	dsl	1300	WILSON 90	800	14,000
F-W Drlg	9	dsl	800	IDECO H725	750	11,000
G-E Drlg	2	dsl	1000	UNIT 34	500	6,700
Harkins & Co	2	dsl	1500	BRWSTR N95	1500	14,000
Magee-Poole Drlg	15	dsl	1475	CABOT/FRANKS Explorer III	700	9,000/4"
Nicor Drlg	75	dsl-mech	1500	CABOR/FRANKS 2550TRD	1200	15,000
Padre Drlg	4	dsl	500	BRWSTR H4210	400	7,500
	3	dsl	700		800	10,000
PRC Drlg	5	dsl	1198	GAR-DEN 700M	800	13,000
	3	dsl	1250	BRWSTR N46	730	10,000
	9	dsl	1140	RMI 4610	1140	16,000
OCHILTREE						
Bravo Drlg	3	dsl	870	BDW 800	870	14,000
	2	dsl	870	BDW 800	870	14,000
Eagle Drlg	4	dsl	1100	M-CSCO U15	850	10,000
Hudson Drlg, Leonard	1	dsl	900	UNIT U15	900	11,500
Mercury Drlg	11	dsl	750	EMSCO U15	900	9,000
Moran Drlg, E W	7	dsl	1600	GAR-DEN 700	800	13,000
Slawson Drlg	7	dsl	480	IDECO H35	480	7,500
Unit Drlg & Expl	2	dsl	700	UNIT U15	800	12,500
OLDHAM						
Baker & Taylor Drlg	9	dsl	870	M-CSCO U15	870	11,000
	1	dsl	870	M-CSCO U15	870	10,000
	19	dsl	870	UNIT U15	870	11,000
	7	dsl	870	UNIT U15	870	11,000
PALO PINTO						
Carter Dev	2	dsl	300	WILSON Mogul	300	6,000
Challenger Drlg	29	dsl	720	NATL T45	860	9,500
E & H Drlg	7	dsl	500	NATL T32	350	6,500
Min-Tex Drlg	26	dsl	700	Crdwll L	350	4,000
	33	dsl	350	WILSON Mogul	475	5,200
Oilwell Drlg	6	dsl	476	WILSON 550		5,500
	7	dsl	476	Spencer 5000	476	7,000
Wes-Mor Drlg	10	dsl		M-CSCO U15		7,500
PANOLA						
Bailey Drlg	1	dsl	1700	CABOT/FRANKS 2550	1000	13,500
Cothrum Drlg	3	dsl	1200	BRWSTR N72W	912	12,000
D B Drlg-Shreveport	30	dsl	1200	BETH 450	1200	12,500
France Drlg	3	elec	2400	OILWELL E760	2400	17,000
Gibson Drlg	3	dsl	820	WILSON Mogul 42	666	6,500

TEXAS (Cont'd)

Contractor	Rig No.	Type Power	Total HP All Main Mud Pumps	Drawworks Make and Model	Total HP Available to Drwwks	Rated Depth with 4½" Pipe
PANOLA (Cont'd)						
Globe Drlg	3	dsl	800	M-CSCO U15	800	12,000
Murco Drlg	38	dsl-el-scr	1700	OILWELL 660E	700	12,000
Pozos Intl Drlg Serv	1080	dsl	1500	IDECO BIR8005	940	11,000
Sawyer Drlg & Serv	4	dsl	1000	BRWSTR N7	1000	12,500
	8	gas	1100	BRWSTR N7	1100	11,500
Thunderbolt Drlg	53	dsl	1400	WILSON 75	950	11,000
Transcontinental Drlg-Shreveport	22	dsl	750	BRWSTR N7	750	11,000
Wheless Drlg	3	dsl	1800	EMSCO C13	1800	18,000
PARKER						
I X Drlg	4	dsl	476	WILSON Mogul 42 Roadair	476	6,000
Lynx Drlg	3	dsl	500	IDECO H30	360	7,000
Min-Tex Drlg	31	dsl	500	Hyster Mod A	550	10,000
	32	dsl	400	Hyster Mod B	500	7,500
PECOS						
BJM Drlg & Expl	5	dsl	120	UNIT U15	1000	12,000
Cherokee Drlg & Dev	4	gas	1150	WILSON 75	900	11,000
Delta Drlg	36	dsl	2600	EMSCO C2 Type III	2331	23,000
Loffland Bros	112	dsl-elec	3300	M-CSCO U1220EB	2200	25,000
Moran Drlg	39	dsl-el-scr	2600	EMSCO C1 Type II	1500	20,000
Parker Drlg	87	gas	1800	IDECO E2000	1800	25,000
	16	gas	1000	OILWELL 76	1000	16,000
	121	dsl-elec	2700	IDECO E3000	3000	30,000
	89	gas	1600	NATL 1320	1600	23,000
Penrod Drlg	121	dsl	1600	NATL	3000	30,000
	111	dsl	1950	NATL 1625M	3000	30,000
	114	dsl	1600	NATL 1625M	3000	30,000
Quarles Drlg (OK)	2	dsl	1500	OIME 1000	1000	18,000
Rod Ric	2	dsl	450	BETH S45E	400	7,000
Santa Fe Drlg Western	3	dsl-elec	2600	EMSCO A1500E	2700	30,000
	16	dsl	2600	EMSCO C2	2000	25,000
	14	dsl	3200	EMSCO C3E	2000	30,000
	4	dsl-elec	2600	EMSCO C111E	2700	30,000
	2	gas	1850	BETH B1013	2118	21,000
	8	dsl-elec	2600	EMSCO A1500E	2700	30,000
Sharp Drlg	64	dsl	1560	OILWELL 760	1836	18,000
	60	dsl-elec	3108	EMSCO C3 Type II	3656	30,000
	34	dsl	2331	BETH 1013	2742	30,000
T O T Drlg	3	dsl	1155	OIME SL5	1155	15,000
Verna Corp	18	dsl-elec	1000	NATL 1320E	2000	22,000
POLK						
Circle C Drlg	1	dsl	1400	NATL 100	1450	15,000
Cliffs Drlg	41	dsl	2600	NATL 1320	2475	25,000
Eagle Prod & Drlg Serv	1	dsl-elec	2000	OILWELL 840E	2000	20,000
Hinton Drlg, W B	8	dsl	1300	Spencer 7000	400	10,000
Woolf & Magee	2	dsl	1550	GAR-DEN 700	1000	13,500
PRESIDIO						
Parker Drlg	74	gas	1400	NATL 100M	1400	22,500
RAINS						
Delta Drlg	21	dsl	2300	GAR-DEN 1100	2592	17,000
Penrod Drlg	107	dsl	1000	NATL 80B	1760	15,000
Transcontinental Drlg-Shreveport	35	dsl	1000	GAR-DEN 800M	1000	15,000
REAGAN						
FWA Drlg	12	dsl	915	WILSON Giant	900	10,000
	4	dsl	1365	WILSON Giant	900	11,000
	30	dsl	1100	WILSON Giant	900	10,000
Mid-America Drlg & Expl	1	dsl	1000	NATL 50CA	660	11,000
Moran Bros	54	dsl	970	NATL T20	300	6,000
Wes-Tex Drlg	8	dsl	335		500	8,000
REEVES						
Cactus Drlg Co	67	dsl	520	NATL T32	454	6,500
Kenai Drlg of Texas	18	dsl	410	IDECO H35	450	6,500
Parker Drlg	88	gas-elec	2700	NATL 130	3000	30,000
Resource Drlg	RD-25	dsl	1560	NATL 80B	1835	14,000
Rod Ric	6	dsl	450	BETH S45E	450	7,000
Rowan Drlg US	12	dsl	2000	NATL 1320M	2100	18,000
Santa Fe Drlg Western	5	gas	2600	BETH B1013	2118	22,000
Sharp Drlg	59	dsl	2331	BETH MC950	2742	23,000
TMBR Drlg	24	dsl	1100	GAR-DEN 700	1100	14,000
REFUGIO						
San Patricio Corp	5	dsl	1000	Shaffer 800	600	9,000
Southland Drlg	4	dsl	850	BRWSTR N7	900	10,000
Williams Drlg of South TX	1	dsl	585	CABOT/FRANKS 750	750	9,500/4"
REYNOLDS						
Safari Drlg	6	dsl	300	EMSCO U34	370	6,000
	4	dsl	310	NATL T20	270	6,000
	3	dsl	340	BRWSTR N4	300	7,000

TEXAS (Cont'd)

Contractor	Rig No	Type Power	Total HP All Main Mud Pumps	Drawworks Make and Model	Total HP Available to Drwwks	Rated Depth with 4½" Pipe
ROBERTS						
Baker & Taylor Drlg	6	dsl	1400	M-CSCO U40	1400	20,000
	8	dsl	870	M-CSCO U15	870	11,000
Basin Drlg	4	dsl	1600	GAR-DEN 700M	820	14,000
Hudson Drlg, Leonard	6	dsl	550	BRWSTR N7	900	12,000
Moran Drlg, E W	24	dsl	920	Spencer 7000	450	9,500
Robinson Bros Drlg	17	dsl	600	GAR-DEN 500	650	9,000
Service Drlg (OK)	9	dsl	800	UNIT RU34	1000	10,000
Service Drlg (TX)	11	dsl	400	M-CSCO U34	400	5,000
	12	dsl	1000	EMSCO D2	800	12,000
Unit Drlg & Expl	14	dsl	1000	GAR-DEN 700	1300	16,000
ROBERTSON						
M N D Drlg-Southern	14	dsl-elec	1820	M-CSCO U712	1200	16,000
RUNNELS						
Hack Drlg	2	dsl	350	BRWSTR N4	350	5,500
Mesa Drlg	2	dsl	675	Weiss W45	500	8,000
	3	dsl	675	Mac 300	550	8,000
RUSK						
Eagle Prod & Drlg Serv	4	dsl-elec	2000	OILWELL E760	1000	16,000
France Drlg	7	dsl	1300	GAR-DEN 500	800	11,000
FWA Drlg	33	dsl	1750	GAR-DEN 700M	1040	12,000
Gibson Drlg	11	dsl	1200	EMSCO D2	1200	12,000
Henley Drlg	9	dsl-elec	2600	EMSCO C2	2600	25,000
Hinton Drlg, W B	6	dsl	1600	NATL 80B	1650	15,000
	5	dsl	900	Spencer 7000	450	10,000
IBIS Ltd	IBIS 1	dsl	1450	WILSON 90	1350	16,500
Justiss Oil	21	dsl	800	EMSCO GB500	1000	12,000
Loffland Bros	203	dsl	1140	M-CSCO U15	1000	10,000
McMurrey Petr	2	dsl	800	Spencer	750	10,000
Pozos Intl Drlg Serv	981	dsl	1890	BRWSTR N46	940	12,500
Rainbow Drlg	4	dsl	1800	CABOT/FRANKS 1200	1200	14,000
	5	dsl	2000	CABOT/FRANKS 1200	1200	15,000
Sawyer Drlg & Serv	11	dsl	600	WILSON Giant	400	9,000
United Drlg Div	4	dsl	1000	Superior PSD700	700	10,000
	9	dsl	1200	BETH M58	800	12,500
Verna Corp	27	dsl	1000	M-CSCO U15	600	10,000
	28	dsl	1000	M-CSCO U15	600	10,000
Woolf & Magee	3	dsl	1450	GAR-DEN 700	1275	13,500
SABINE						
Justiss Oil	31	gas-btne	500	WILSON Giant Roadair	650	10,000
SAN JACINTO						
Big 6 Drlg	3	dsl	750	CABOT/FRANKS	600	11,000
Delta Drlg	99	elec	3200	EMSCO C2	3456	25,000
SAN PATRICIO						
Dixilyn-Field Drlg	25	dsl	1600	NATL 80UE		15,000
F-W Drlg	12	dsl	1000	BRWSTR N46	800	13,000
Flournoy Drlg	11	dsl	912	IDECO BIR800	950	10,000
J 3 Drlg	4	dsl	1100	UNIT U34B	750	8,500
Kelley & Kerr Drlg	KK-1	dsl-elec	2000	OIME SD7	1500	18,000
Magee-Poole Drlg	9	dsl	2350	CABOT/FRANKS	1500	16,000
Resource Drlg	18	dsl	1040	NATL 610	1220	12,000
Southland Drlg	14	dsl	2225	EMSCO A1500	2500	24,000
SCHLEICHER						
BJM Drlg & Expl	4	dsl	1200	UNIT U15	1000	12,000
Tucker Drlg	3	dsl	350	BRWSTR N45	600	6,500
TMBR Drlg	15	gas	700	M-CSCO U15	500	10,500
SCURRY						
Cam Drlg	2	dsl	510	BETH S55	750	10,000
D B Drlg	23	dsl	390	BETH S45E	700	9,000
	6	dsl	1050	BRWSTR N45	650	9,000
	2	dsl	675	NATL T32	540	8,500
	11	dsl	770	Shaffer SOS-6000	540	8,500
Kenai Drlg of Texas	25	dsl	700	EMSCO GB500	800	11,000
McCutchan Drlg, J W	3	dsl	820	WILSON Atlas Roadair	820	10,500
Riley Drlg	4	dsl	300	CABOT/FRANKS	300	4,500
Rio Colorado Drlg	133	dsl	1100	IDECO H40	600	8,000
SHACKELFORD						
F-W Drlg	2	dsl	600	M-CSCO U34	350	7,000
Jones Drlg Co	53	dsl	225	Houston Portable	225	3,000
	55	dsl	450	BETH S45	425	7,000
	54	dsl	425	BETH S45	425	6,000
	51	dsl	425	BRWSTR N4	425	6,000
Lynx Drlg	2	dsl	500	IDECO H30	360	7,000
SHELBY						
Verna Corp	32	dsl	1212	Verna U15	500	11,000
SHERMAN						
Diatom Drlg	2	dsl	630	Ingersoll 600	650	10,000
Service Drlg (OK)	5	dsl	1000	UNIT RU15	800	10,500
Service Drlg (TX)	3	dsl	300	M-CSCO U34	400	6,500
	5	dsl	1000	M-CSCO U15	800	10,000
Stahlco Drlg	1	dsl	510		475	5,000

TEXAS (Cont'd)

Contractor	Rig No.	Type Power	Total HP All Main Mud Pumps	Drawworks Make and Model	Total HP Available to Drwwks	Rated Depth with 4½" Pipe
SLACKER						
Wes-Tex Drlg	7	dsl	335	BRWSTR N4	450	8,000
	6	dsl	650	BETH S60	700	10,000
	10	dsl	300	BRWSTR N4	500	8,000
SMITH						
Continental Drlg	6	dsl-elec	2600	IDECO E1700	1700	19,000
	3	dsl-elec	2600	IDECO E1700	1700	19,000
Delta Drlg	64	dsl	1500	EMSCO D2 Type III	784	11,000
	54	dsl	2000	NATL 80B	1560	14,000
	74	dsl	1000	Spencer 7000	480	9,000
Gibson Drlg	10	dsl	1200	EMSCO D2	1200	12,000
	7	dsl	895	EMSCO GB350	660	8,500
Hinton Drlg, W B	3	dsl	1700	NATL 80B	1650	15,000
Justiss Oil	34	gas-btne	700	BETH M58	1000	12,000
Maxwell Herring Drlg	12	dsl	1500	WILSON 150A	2500	15,000
	14	dsl	1000	WILSON Giant	900	12,000
	18	dsl	3250	GAR-DEN 1100	2700	23,000
	20	dsl	1800	BRWSTR 75A	1200	112,000
	3	dsl	1000	GAR-DEN 800	1000	12,000
	19	dsl	2100	GAR-DEN 1100	2100	18,000
	17	dsl	2500	BETH 1500	2400	20,000
Penrod Drlg	18	dsl	2250	NATL 1625M6	2200	10,000
Rotary Drlg	11	dsl	850	Spencer 7000	700	10,600
United Drlg Div	2	dsl	1200	BETH M58	800	13,000
	8	dsl	1600	BETH M58	1200	13,000
Verna Corp	22	dsl	550	M-CSCO U15	600	10,000
	30	dsl	550	M-CSCO U15	600	10,000
STARR						
Atco Drlg Southern	11	dsl	1600	NATL 55	550	12,000
Bawden Drlg, Peter (TX)	7	dsl	1200	NATL 55	700	11,500
Corpus Christi Drlg	4	dsl	300	WILSON Super 38	250	5,450
Flournoy Drlg	4	dsl	900	CABOT/FRANKS Explorer III	600	9,000/4"
Magee-Poole Drlg	14	dsl	1475	CABOT/FRANKS Explorer III	700	9,000/4"
STEPHENS						
E & H Drlg	2	dsl	400	M-CSCO U34	325	6,000
Faulk Drlg	4	dsl	450	BRWSTR N4	450	6,000
Lowe Drlg	6	dsl	300	M-CSCO U34	475	6,000
Sealy & Co	1	dsl	290	GAR-DEN 1500	290	1,500
	2	dsl	350	Failing 2500	350	2,500
Wes-Mor Drlg	6	gas-btne		M-CSCO U34		4,500
STERLING						
Britton Inds Drlg	2	dsl	1000	NATL 50CA	1000	12,000
	4	dsl	1000	NATL 50CA	1000	13,000
M G F Drlg-Midland	11	dsl	900	BETH M58	900	12,500
Moran Bros	58	dsl	1300	CABOT 750	750	9,000
Tucker Drlg	12	dsl	750	NATL 50A	750	10,000
	2	dsl	750	EMSCO GB500	750	10,000
Wes-Tex Drlg	1	dsl	650	NATL 50A	650	10,000
	9	dsl	700	NATL 50A	700	10,000
	17	dsl	335	UNIT U34	500	8,000
STEVENS						
Lowe Drlg	2	dsl	475	M-CSCO U34	475	6,000
STONEWALL						
Bandera Drlg	2	dsl	470	UNIT 34	360	6,500
Cam Drlg	1	dsl	500	BETH S45E	650	8,000
Hack Drlg	4	dsl	225	NATL T8	250	4,000
I X Drlg	3	dsl	392	BETH	475	8,500
Mesa Drlg	4	dsl	675	SOS 6000	550	8,000
Safari Drlg	2	dsl	370	Crdwll L350	370	7,000
Sojourner Drlg	3	dsl		M-CSCO U15	550	7,000
	2	dsl		M-CSCO U15	550	7,000
Texzona Drlg	1	dsl	475	M-CSCO U34B	450	6,500
Wes-Tex Drlg	21	dsl	350	UNIT U34	450	7,000
SUTTON						
Delta Drlg	73	dsl	500	Spencer 7000	440	9,000
Penrod Drlg	25	dsl	2600	EMSCO C2	1950	25,000
TMBR Drlg	11	gas	500	M-CSCO U15	500	10,000
	10	dsl	700	M-CSCO U15CA	500	10,000
	8	dsl	700	NATL 50CA	600	10,500
TAYLOR						
Bandera Drlg	5	dsl	650	MAC 300	475	7,500
D B Drlg	4	dsl	675	UNIT U34	540	7,000
Douglas Drlg	2	dsl	900	RDW 650M	900	12,500
F-W Drlg	5	dsl	600	IDECO H25	350	6,000
Hack Drlg	1	dsl	350	BRWSTR N4	350	7,000
Helter Skelter Drlg	2	dsl	1000	BRWSTR N46	950	10,000
Tri-J Drlg	1	dsl	325	Wichtex R5	250	3,000
	3	dsl	500	Mayhew 3000	250	3,000
	5	dsl	375	Wichtex R6A	350	5,000
TERRELL						
Delta Drlg	2	dsl	1400	GAR-DEN 700M	784	12,500
	61	dsl	1800	IDECO Super 711	1640	15,000
Resource Drlg	RD-26	dsl	1560	NATL 80B	1835	14,000

Contractor	Rig No.	Type Power	Total HP All Main Mud Pumps	Drawworks Make and Model	Total HP Available to Drwwks	Rated Depth with 4½" Pipe
TEXAS (Cont'd)						
TERRY						
Cactus Drlg Corp	9	dsl	1200	BRWSTR N75	1200	13,500
Ladrido Drlg	1	dsl	1600	UNIT U15	1050	13,500
Norton Drlg	8	dsl	550	WILSON 75	900	14,000
Sitton Drlg	6	dsl	650	WILSON 75P	900	10,000
Willbros Drlg	4	dsl	1700	NATL 55	1260	14,000
THROCKMORTON						
Ashtola Drlg	1	dsl	800	NTM U15	600	7,500
F-W Drlg	6	dsl	600	NATL T20	400	6,000
Oilwell Drlg	2	dsl	476	BETH S50	476	7,000
	8	dsl	800	SOS6000S	650	8,000
Wes-Mor Drlg	1	dsl		M-CSCO U15		8,000
TOM GREEN						
Bandera Drlg	11	dsl	925	BDW 450T	540	9,000
	7	dsl	750	MAC 300	400	7,500
Cothrum Drlg	9	dsl	900	BRWSTR N4	500	6,500
D B Drlg	22	dsl	410	UNIT U34	368	7,000
GCO Drlg	6	dsl	820	BDW 650M	650	10,000
Lange Drlg, LeRoy	1	dsl	225	Jaswell	525	3,500
M N D Drlg-Northern	61	dsl	700	M-CSCO 36A	600	11,500
McBay Oil & Gas	11	dsl	3406	BETH S50	3408	8,000
Mellon Drlg	4	dsl	750	BETH S50	375	7,000
Stahlco Drlg	2	dsl	510	Ingersoll T5	485	5,000
Transcontinental Drlg-San Angelo	33	dsl	898	UNIT U15	650	8,500
	30	dsl	750	BRWSTR N55	750	10,000
	96	dsl	1000	UNIT U36A	850	12,000
Tucker Drlg	1	dsl	750	BRWSTR N55	750	10,000
	6	dsl	750	BRWSTR N75	750	12,000
	7	dsl	375	BETH 560	600	7,000
	4	dsl	214	M-CSCO U15	450	7,500
	10	dsl	750	BRWSTR N45	750	7,500
	5	dsl	750	EMSCO GE500	750	10,000
	8	dsl	550	IDECO H40	550	9,000
TYLER						
Globe Drlg	8	dsl-elec	3000	GAR-DEN GD1000	1500	20,000
UPSHUR						
Guffey-Schlenaker Drlg	3	dsl	1270	NATL 75CA	1270	14,000
Justiss Oil	27	dsl	700	BETH MC450	900	12,000
	26	dsl	940	EMSCO GB500	940	12,000
Maxwell Herring Drlg	2	dsl	1034	BETH M810	926	12,000
Nowotny & Conley Drlg	4	dsl	1600	NATL 610	800	13,000
UPTON						
BJM Drlg & Expl	3	dsl	1200	NATL 150AC	1000	12,000
FWA Drlg	3	dsl	1250	WILSON Super Giant	1040	13,000
Henley Drlg	219	dsl	1650	BRWSTR N46	950	12,000
Sledge Drlg, D	4	dsl	600	M-CSCO U15	800	10,000
Sterling Drlg (TX)	17	dsl	1500	BRWSTR N75	1230	14,000
Tahoe Drlg	4	dsl	950	GAR-DEN 500M	950	12,000
TMBR Drlg	5	dsl	700	NATL 50CA	600	10,500
Verna Corp	19	dsl	550	M-CSCO U15	800	11,500
Wes-Tex Drlg	20	dsl	600	NATL 50CA	900	10,000
VAL VERDE						
Delta Drlg	4	dsl	2150	NATL 100	1560	16,000
Wes-Tex Drlg	3	dsl	700	NATL 50A	700	10,000
VICTORIA						
Bilbo Drlg	1	dsl	500	BRWSTR N4A	500	8,000/4"
Continental Drlg	14	dsl-elec	2000	IDECO ED1200	1200	16,000
	2	dsl-elec	2600	IDECO E1700	1700	19,000
Eltex Drlg Contractors	250	dsl	615	BRWSTR N46	800	11,000
	3[illegible]2	dsl-elec	1300	GAR-DEN 1100E	1500	22,000
	102	dsl	615	EMSCO D2	1230	12,500
	3	dsl	615	WILSON Giant	450	9,000
	257	dsl	615	BRWSTR N75	1230	13,500
	301	dsl		GAR-DEN 800M	1845	16,500
	103	dsl	615	BRWSTR N75	1230	13,500
	4	dsl	615	IDECO H750	600	10,000
FWA Drlg	29	dsl	2600	NATL 110	2400	20,000
G-E Drlg	8	dsl	800	IDECO H400B	500	8,000
Houtech Drlg	803	dsl	1600	GAR-DEN 700	1200	15,000
	802	dsl	1600	GAR-DEN 700M	1200	15,000
	804	dsl	1600	GAR-DEN 700	1200	15,000
	801	dsl	1500	Senco 1400M	1300	15,000
M N D Drlg-Southern	4	dsl	1540	GAR-DEN 1100	1540	18,000
Padre Drlg	7	dsl	700	BRWSTR H14610	750	10,000
	2	dsl	500	BRWSTR H4210	400	7,500
PRC Drlg	4	dsl	758	CABOT/FRANKS 900	900	10,000
Southland Drlg	8	dsl	700	EMSCO GB350	700	8,000
WALKER						
Cliffs Drlg	40	dsl-elec	2600	NATL 1320UE	3025	25,000
WALLER						
Harkins & Co	3	dsl	1260	BRWSTR N75A	1260	12,500
PRC Drlg	2	dsl	880	UNIT 34	460	7,500/4"
T-L Drlg	11	dsl	1000	BRWSTR N75	1000	14,000
TEXAS (Cont'd)						
WARD						
Cactus Drlg Corp	1	dsl	1650	NATL 110	1650	20,000
Delta Drlg	100	elec	2000	EMSCO D3	1560	16,000
GCO Drlg	2	dsl	640	BDW 450	450	7,500
Kenai Drlg of Texas	17	dsl	800	BRWSTR N4	580	7,000
	13	dsl	800	EMSCO GA250T	400	6,500
Sharp Drlg	67	dsl	2331	M-CSCO U814C	2742	23,500
T O T Drlg	2	dsl	1155	OIME SL5	1155	15,000
Verna Corp	31	dsl	1212	M-CSCO U15	800	11,000
WASHINGTON						
Bailey Drlg, Parrie	22	dsl	1500	OIME SL5	900	13,000
	23	dsl	1600	OIME SL7	1400	15,000
WEBB						
Alenco Drlg	2	dsl	1000	IDECO H40	600	10,000
Atco Drlg Southern	50	dsl	1850	NATL 100HD	750	15,000
	19	dsl	1500	OILWELL 66	700	10,500
Bearden Drlg, Jack E	3	dsl	1200	WILSON Mogul Super 42	750	9,500
Buzzini Drlg	11	dsl-elec	3400	OILWELL E3000	3000	30,000
Delta Drlg	63	dsl-elec	2600	EMSCO C1 Type II	2502	16,000
Dixilyn-Field Drlg	10	dsl	1295	NATL 55	1040	12,000
Flournoy Drlg	12	dsl-elec	2700	GAR-DEN 1100E	1500	17,000
J 3 Drlg	2	dsl	1650	UNIT U36A	950	14,000
	1	dsl	1375	UNIT U36A	950	14,000
Rio Colorado Drlg	145	dsl	2000	NATL 110	1650	18,000
Texas Drlg	10	dsl	2000	CABOT/FRANKS 1200	1200	15,000
	5	dsl	1700	CABOT/FRANKS 1200	1200	17,000
	7	dsl	1700	CABOT/FRANKS 900	900	11,500
	8	dsl	2000	CABOT/FRANKS 1200	1200	15,000
Williams Drlg of South TX	3	dsl	800	IDECO BIR8085	850	11,500/4"
	2	dsl	1280	CABOT/FRANKS 900	900	10,500/4"
WHARTON						
B D K Drlg	1	dsl	1000	WILSON GIANT	580	8,500
Bawden Drlg, Peter (TX)	2	dsl-el-scr	2600	NATL 1320UE	2000	22,000
Burro Drlg	1	dsl	500	WILSON Mogul 42	500	9,000
Chapman Drlg	103	dsl-elec	1000	NATL 370UE	550	12,000
Richards Drlg	5	gas-btne	1200	BRWSTR N75	900	12,500
	2	dsl	1500	BRWSTR N75	1200	12,500
ROKK Drlg	ReacoeD	dsl	800	NATL 125	1200	18,000
WHEELER						
Baker & Taylor Drlg	3	dsl	1200	M-CSCO U20	1200	18,000
	2	dsl	1400	M-CSCO U20	1400	20,000
Cliffs Drlg	27	dsl	2600	NATL 1320	2475	25,000
Cothrum Drlg	10	dsl	1500	GAR-DEN 1500	2250	24,000
Dual Drlg	36	dsl	2000	OILWELL 760	1000	16,000
Helmerich & Payne Intl Drlg	82	dsl-scr	2800	OILWELL E2000	2000	26,000
	80	dsl-scr	2200	NATL 110UE	1500	20,000
	47	dsl	2475	OILWELL M2000	2730	26,000
Loffland Bros	222	dsl-elec	3300	M-CSCO U1220B	2200	28,000
Murco Drlg	58	dsl-scr		Superior 4000E		54,000
Noble Drlg	OW-22	dsl-elec	3300	OILWELL E2000	3300	25,000
	N-115	dsl	2130	NATL 110	2130	20,000
Parker Drlg	178	dsl	2200	OIME SL1500P	2200	22,000
	47	gas	1400	OIME 1500P	1400	20,000
	218	gas	1400	OIME 1000C	1400	18,000
	71	gas	1600	NATL 125	1600	20,000
	162	dsl	2200	OIME SL1500P	2200	22,000
Penrod Drlg	117	dsl	1300	NATL 1625M	2000	25,000
	116	dsl	1300	NATL 1320M	2000	25,000
Resource Drlg	8	dsl	2330	NATL 110	2740	18,000
Robinson Bros Drlg	25	dsl	3000	OIME SL7	3000	20,000
Service Drlg (OK)	12	dsl	800	EMSCO D2	1000	15,000
Sharp Drlg	68	dsl-elec	2331	OILWELL M2000E	2742	30,000
WICHITA						
Moran Bros	64	dsl	1100	EMSCO GA500	600	10,000
Moran Drlg, E W	12	dsl	1200	BETH S60	600	10,000
WILBARGER						
Bearden Drlg, Jack E	1	dsl	1200	WILSON Mogul Super 42	750	9,000
Burns L D Drlg	1	dsl	1360	Sea Coast 10004S	780	14,000
Lin-Mour Drlg	35	gas	700	WILSON Giant	700	10,000
WILLACY						
Padre Drlg	8	dsl	700	BRWSTR H14610	750	10,000
WILSON						
F-W Drlg	18	dsl	800	Duggan DS5	600	7,000
Nixon Drlg	7	dsl	400	Midway	600	6,500
WINKLER						
Cactus Drlg Co	70	dsl	730	NATL 370	950	9,000
Holliday Drlg	1	dsl	1000	GAR-DEN 700	1000	12,000
Kenai Drlg of Texas	19	dsl	825	EMSCO GA500	800	11,000
Santa Fe Drlg Western	10	dsl-elec	2000	EMSCO Electrohoist II	1800	22,000

TEXAS (Cont'd)

Contractor	Rig No.	Type Power	Total HP All Main Mud Pumps	Drawworks Make and Model	Total HP Available to Drwwks	Rated Depth with 4½" Pipe
WINKLER (Cont'd)						
Sharp Drlg	66	dsl-elec	2331	M-CSCO U1220EB	2742	30,000
Sterling Drlg (TX)	2	dsl	1500	NATL 610	1150	13,000
Verna Corp	12	dsl	900	M-CSCO U15	600	11,500
WISE						
M N D Drlg-Northern	55	dsl	600	M-CSCO U15	600	9,000
	54	dsl	600	M-CSCO U15	600	9,000
	53	dsl	600	M-CSCO U15	600	9,000
	51	dsl	680	NATL 50	550	7,000
	5001383	dsl	800	M-CSCO U15	880	9,500
	65	dsl	700	M-CSCO U36A	700	12,000
	5001384	dsl	800	M-CSCO U15	800	9,500
	60	dsl	800	M-CSCO U15	800	9,500
	66	dsl	700	M-CSCO U36A	700	12,000
	1359	dsl	450	EMSCO-350	450	6,000
	62	dsl	600	M-CSCO U15	600	9,000
	52	dsl	550	M-CSCO U15	550	7,000
WOOD						
Cape Drlg	2	dsl	1000	BRWSTR TR7W	600	8,500
Hinton Drlg, W B	9	dsl-elec	2600	NATL 110UE	3000	20,000
Justiss Oil	14	dsl	800	EMSCO GB500	900	11,000
	28	dsl	700	OILWELL 96	1000	15,000
Noble Drlg	N-812	dsl	1420	NATL 80B	1420	15,000
Thunderbolt Drlg	20	dsl	1150	WILSON Mogul	476	8,000
YOAKUM						
Chico Drlg	6	dsl	1300	EMSCO D2	1224	14,000
Hondo Drlg	4	dsl	1650	BRWSTR N75	1100	14,000
Kenai Drlg of Texas	28	dsl	1200	BRWSTR N7	800	12,000
M G F Drlg-Midland	1	dsl	750	BETH M58	750	12,500
	5	dsl	500	EMSCO GA250	400	9,000
Norton Drlg	11	dsl	550	WILSON 75	900	12,000
	7	dsl	450	WILSON 65	650	8,500
Sitton Drlg	1	dsl	450	WILSON 600	525	6,500
	7	dsl	450	WILSON 75P	900	11,500
Verna Corp	26	dsl	500	IDECO H40	750	8,000
	1	dsl	600	BRWSTR N55	800	12,500
	2	dsl	600	BRWSTR N55	800	12,500
YOUNG						
Bearden Drlg, Jack E	4	dsl	600	WILSON Mogul 42	400	6,500
Burns L D Drlg	3	dsl	800	WILSON 75	780	10,500
E & H Drlg	5	dsl	600	WILSON Mogul	350	6,500
Franklin Drlg	2	dsl	400	GAR-DEN	400	2,500
	1	dsl	300	GAR-DEN 1500	300	1,500
Grand Drlg	1	dsl	600	Schaffer SS6006	475	8,000
Lin-Mour Drlg	5	dsl	750	EMSCO G-42	750	7,000
Luke Grace Drlg	2	dsl	500	M-CSCO U15	750	10,500
Megargel Drlg	6	dsl	350	BETH S45B	275	6,000
	4	dsl	350	BETH S45B Double Jackknife	275	5,370
Wes-Mor Drlg	8	gas-btne		M-CSCO U15		6,500
	7	dsl	680	M-CSCO U34	680	7,500
ZAPATA						
Atco Drlg Southern	57	dsl	1600	NATL 610UE	800	12,000
Bearden Drlg, Jack E	2	dsl	1500	WILSON Model 75 Winchmobile	900	9,000
Cinco Drlg	14	dsl-elec	2400	OIME SD5	1500	14,000
Delta Drlg	17	dsl-el-scr	2300	EMSCO C1 Type II	2582	16,000
Harkins & Co	8	dsl	1800	EMSCO C1 Type III	1800	18,000/5"
Helmerich & Payne Intl Drlg	37	dsl	2835	OILWELL M2000	2835	22,000
Penrod Drlg	22	dsl	2600	NATL 1320N	1950	25,000
	119	dsl	1600	NATL 1625M	3000	30,000
PRC Drlg	1	dsl	800	BRWSTR H4610A38	500	8,000
Texas Drlg	2	dsl	1700	BRWSTR N7	1200	12,500
	6	dsl	1200	CABOT/FRANKS 900	850	11,000
	3	dsl	1700	NATL 50A	1455	12,500
	9	dsl	1800	EMSCO D2	1200	14,000
Willis Drlg	3	dsl	1000	BRWSTR N75	1000	12,000
ZAVALA						
Blocker Drlg-Alice	10	dsl	825	IDECO Hydrair H37ESC	434	7,500
	17	dsl	825	SPENCER	530	7,000
	15	dsl	1265	CABOT/FRANKS Series 900	950	10,000
Cactus Drlg Co	55	dsl	520	IDECO H35	670	6,500
PRC Drlg	10	dsl	1075	Cooper LTO700	550	9,500
Sundown Drlg	1	dsl	400	EMSCO 160GB	400	5,500

UTAH

Contractor	Rig No.	Type Power	Total HP All Main Mud Pumps	Drawworks Make and Model	Total HP Available to Drwwks	Rated Depth with 4½" Pipe
UNDESIGNATED						
TWT Expl	2	dsl	200	GAR-DEN 15W	200	2,000
	9	dsl	1800	OILWELL 760	1800	14,000
	4	dsl	300	NATL T10	300	4,000
	8	dsl	1350	IDECO	1350	12,000
	7	dsl	1800	GAR-DEN 800	1800	10,000
	6	dsl	1350	NATL 55	1350	12,000
	5	dsl	880	Model O Crdwll	880	10,000

UTAH (Cont'd)

Contractor	Rig No.	Type Power	Total HP All Main Mud Pumps	Drawworks Make and Model	Total HP Available to Drwwks	Rated Depth with 4½" Pipe
UNDESIGNATED (Cont'd)						
W E S Corp	7		1000	WILSON Giant	1000	12,000
Westburne Drlg Canada	65	dsl	520	NATL T45	460	8,500
CARBON						
Grace-Bomac Drlg	91	dsl	1650	NATL 80B	1650	16,000
DAGGETT						
All Western Drlg	2	gas	800	M-CSCO U15	700	10,000
DUCHESNE						
Bowden Drlg Ltd, Peter	21	dsl-el-scr	2000	EMSCO C1	1500	18,000
Olsen Drlg	5	dsl	6015	Crdwll 1350	900	6,000
Transcontinental Drlg-Denver	57	dsl	1100	GAR-DEN 800	1300	13,000
TWT Expl	51	dsl				5,500
	57	dsl				17,000
	56	dsl				12,000
	55	dsl				8,000
Viersen & Cochran Drlg	7	dsl	1700	M-CSCO U712A	1564	18,000
W E S Corp	51	dsl				5,000
Westburne Drlg	65	dsl	670	NATL T45	400	8,500
EMERY						
Loffland Bros	12	dsl	840	IDECO Hydrair H44CSC	868	10,000
Nicor Drlg	46	dsl-elec	2000	EMSCO C1E	1000	21,000
Shelby Drlg	3	dsl	380	CABOT/FRANKS Rocket 1287	450	7,000
GARFIELD						
Kenting Drlg	20-E	dsl-elec	2400	M-CSCO U914 EC	2000	20,000
Loffland Bros	58	dsl-elec	1600	NATL 80B	2000	15,000
Shelby Drlg	53-E	dsl-elec	1000	NATL 370ESCR	700	10,000
GRAND						
Atco Drlg	18	dsl	326	326	320	7,500
Parker Drlg	112	dsl	3000	IDECO 3000	3000	30,000
Veco Drlg	3	dsl	850	M-CSCO U36A	700	9,000
JUAB						
Penrod Drlg	102	dsl	1600	NATL 610M	964	16,000
MILLARD						
Montgomery Mountain Drlg	31	dsl	2000	NATL 110UE	2700	18,000
RICH						
Brinkerhoff-Signal	2	dsl	875	M-CSCO U36A	800	9,000
SAN JUAN						
Anderson-Myers Drlg	18	dsl	800	NATL T45	800	10,000
	10	dsl	670	NATL T32	600	8,500
Arapahoe Drlg	11	gas-btne	300	NATL T32	320	9,000
	7	gas-btne	700	NATL T45	700	10,000
	2	gas-btne	300	NATL T32	320	8,000
Aztec Well Serv	289			WILSON		10,500
Brinkerhoff-Signal	32	dsl	1000	EMSCO GC350	465	8,000
	76	dsl	800	GAR-DEN M500	800	10,000
Coleman Drlg	3	dsl	920	IDECO H44CSC	636	8,000
	2	dsl	1100	IDECO H40D	636	8,000
Energy Search Drlg	1	dsl	1500	CABOT/FRANKS 900	900	10,000
Mesa Drillers	1	dsl	600	NATL 50A	780	8,000
SEVIER						
Grace-Bomac Drlg	56	dsl	2400	GAR-DEN 1100M	2400	20,000
Parker Drlg	116	dsl-elec	1650	NATL 80B	1650	20,000
SUMMIT						
Brinkerhoff-Signal	83	dsl-elec	2000	EMSCO D3	2000	16,000
Exeter Drlg Northern	43	dsl	2250	EMSCO C Type III	2250	20,000
Loffland Bros	186	dsl	2180	M-CSCO U914C	2400	20,000
Manning, R L	31	dsl-elec	1350	EMSCO D2	700	11,000
	32	dsl-elec	1600	EMSCO D3	1000	16,500
	30	dsl-elec	1600	EMSCO D3	1000	16,500
Noble Drlg	OW-862	dsl	2400	OILWELL 860	2400	18,000
Parker Drlg	148	dsl	1000	OIME 750	1000	13,000
	183	dsl	1650	OIME 1500P	1650	20,000
Rio Grande Drlg	3	dsl	1300	NATL 1320M	2300	25,000
	2	dsl	1000	NATL 80B	1500	16,000
Viersen & Cochran Drlg	11	dsl	2600	NATL 110	2400	20,000
	8	dsl	1480	NATL 80B	1554	18,000
UINTAH						
All Western Drlg	3	dsl	1060	M-CSCO U15	840	10,000
	4	dsl	1500	SUPERIOR 700	750	10,000
	1	dsl	1200	Schramm		1,500

UTAH (Cont'd)

Contractor	Rig No.	Type Power	Total HP All Main Mud Pumps	Drawworks Make and Model	Total HP Available to Drwwks	Rated Depth with 4½" Pipe
UINTAH (Cont'd)						
Brinkerhoff-Signal	85	dsl	550	NATL 370	800	9,000
Loffland Bros	236	dsl	1260	M-CSCO U15	1000	10,000
Manning, R L	9	dsl	650	EMSCO GA500	650	8,500
	23	dsl	800	BRWSTR N45	740	7,500
	10	dsl	720	OILWELL 660	720	10,000
Nicor Drlg	36	dsl	1150	GAR-DEN 500	650	11,000
Olsen Drlg	2	dsl	1250	NATL C350A	1000	10,000
TWT Expl	56	dsl				14,000
	59	dsl				12,000
W E S Corp	59	dsl				12,000
	58	dsl				14,000
UTAH						
Loffland Bros	221	dsl	2880	M-CSCO U1220AE	3200	25,000
WASATCH						
Penrod Drlg	20	dsl	2600	NATL 1320M	1980	25,000

VIRGINIA

Contractor	Rig No.	Type Power	Total HP All Main Mud Pumps	Drawworks Make and Model	Total HP Available to Drwwks	Rated Depth with 4½" Pipe
DICKERSON						
Ray Resources	7	dsl	450	Crdwll KB500	700	8,000
LEE						
Union Drlg	4	dsl	1200	Spencer 8000	340	7,000

WASHINGTON

Contractor	Rig No.	Type Power	Total HP All Main Mud Pumps	Drawworks Make and Model	Total HP Available to Drwwks	Rated Depth with 4½" Pipe
GRANT						
Brinkerhoff-Signal	53	dsl-elec	2325	NATL 110	2325	20,000
LEWIS						
Taylor Drlg	4	dsl	750	NATL 50	750	9,000

WEST VIRGINIA

Contractor	Rig No.	Type Power	Total HP All Main Mud Pumps	Drawworks Make and Model	Total HP Available to Drwwks	Rated Depth with 4½" Pipe
CALHOUN						
FWA Drlg	13	dsl	275	WILSON Giant	300	4,500
CLAY						
Smith Drlg	8	dsl	350	Challenger M280	360	4,500
HARRISON						
Union Drlg	5	dsl	1200	Crdwll 350	385	6,000
JACKSON						
Smith Petr, Carl E	3	dsl		IDECO BIR5525	500	8,000
	1	dsl		EMSCO T97	500	9,500
	2	dsl		Cummings NDT335		4,800
KANAWHA						
FWA Drlg	22	dsl	275	WILSON Super 38	300	4,500
Hurt & Assoc, Clint	8	dsl	350	KREMCO K600	500	7,500
Ray Resources	3	dsl	450	IDECO BIR5525	600	6,000
	6	dsl	430	IDECO DIR-7015	700	8,000
Smith Drlg	12	dsl	450	Challenger M320	400	5,000
McDOWELL						
Ray Resources	9	dsl	480	IDECO H35	600	6,500
MASON						
Delta Drlg	84	dsl	1800	EMSCO D3 Type III	1580	18,000
PLEASANTS						
FWA Drlg	15	dsl	275	WILSON Super 38	300	4,500
PUTNAM						
Smith Drlg	10	dsl	3560	Challenger M320	360	5,000
RANDOLPH						
Union Drlg	1	dsl	1200	Crdwll KM250	425	6,000
RITCHIE						
FWA Drlg	23	dsl	275	WILSON Super 38	300	8,000
Hurt & Assoc, Clint	1	dsl	350	WILSON Mogul 42	500	7,500
	5	dsl	350	WILSON Super 38	350	5,000
	2	dsl	350	WILSON Super 38	350	5,000
Union Drlg	6	dsl	1200	BRWSTR DH-4210	425	8,000
	8	dsl	1300	IDECO BIRH37	425	6,900
ROANE						
Hurt & Assoc, Clint	3	dsl	350	WILSON Super 38	350	5,000
	7	dsl	360	KREMCO K800	500	7,500
TAYLOR						
Union Drlg	3	dsl	1300	IDECO 650	425	9,000

WEST VIRGINIA (Cont'd)

Contractor	Rig No.	Type Power	Total HP All Main Mud Pumps	Drawworks Make and Model	Total HP Available to Drwwks	Rated Depth with 4½" Pipe
TUCKER						
Union Drlg	9	dsl	1200	CABOT/FRANKS Exp III	425	9,000
UPSHUR						
Union Drlg	13	dsl	1200	IDECO BIR5525	425	6,000
	11	dsl	1200	Spencer 5000	360	5,000
WIRT						
Ray Resources	14	dsl		NATL T20	600	6,500
WOOD						
Hurt & Assoc, Clint	6	dsl	350	WILSON Mogul 42	500	7,000
	4	dsl	350	WILSON Super 38	350	5,000

WYOMING

Contractor	Rig No.	Type Power	Total HP All Main Mud Pumps	Drawworks Make and Model	Total HP Available to Drwwks	Rated Depth with 4½" Pipe
UNDESIGNATED						
GCO Drlg	7	dsl	1750	NATL 75CA	1500	13,000
Westburne Drlg Canada	60	dsl	1950	NATL 1320M	1950	20,000
ALBANY						
Simmons Drlg	46	dsl	350	Hycalog HH6000	350	6,800
BIG HORN						
Anderson-Myers Drlg	2	dsl	1200	NATL 55	1200	12,000
Barnhart Drlg	1	dsl	700	IDECO H525	575	7,500
Nicor Drlg	60	dsl	1700	NATL 55M	700	15,000
CAMPBELL						
Apollo	23	dsl	1100	NATL 50A	810	9,000
Atco Drlg	54	dsl-elec	1800	NATL 610UE	1800	12,000
	8	dsl	1230	EMSCO A550	1230	12,000
	27	dsl	720	BETH C50	720	8,500
Baltic Drlg	1	dsl	870	Superior 700	600	10,500
Burris Drlg	118	dsl	860	MAC 400	500	10,500
	119	dsl	450	MAC 400	500	10,500
Cyclone Drlg	6	dsl	800	NATL 50A	800	10,000
	4	dsl	800	UNIT U15	800	9,000
	5	dsl	800	BETH M58	800	12,000
	2	dsl	800	BETH M58	800	12,000
	1	dsl	800	UNIT U15	800	9,000
Exeter Drlg Northern	39	dsl	500	M-CSCO U15	750	9,500
	35	dsl	500	M-CSCO U15	750	9,500
	20	dsl	500	EMSCO GC500	750	11,000
	8	dsl	500	BRWSTR N7	750	9,500
	34	dsl	500	M-CSCO U15	750	9,500
	3	dsl	550	NATL 50A	780	9,500
	21	dsl	550	M-CSCO U15	720	9,500
	37	dsl	500	GAR-DEN 700	1100	12,500
	38	dsl	500	M-CSCO U15	750	9,500
	17	dsl	500	NATL 50A	780	9,500
	9	dsl	750	BRWSTR N75	1100	12,500
	36	dsl	460	BETH M58	750	11,000
Gallagher Drlg	6	dsl	520	Crdwll Model O	970	12,000
Grace-Bomac Drlg	28	dsl	1125	EMSCO GA500	800	[illegible]
Green Drlg	5	dsl	900	Unit Rig U15	900	10,000
	4	dsl	900	UNIT U15	900	11,000
Harpel Drlg	4		1400	BRWSTR N46	900	12,000
Transcontinental Drlg-Denver	53	dsl	810	NATL 50A	980	[illegible]
	40	dsl	1200	OILWELL 76	1224	12,500
True Drlg	19	dsl	1000	NATL 50A	1000	12,000
Westburne Drlg	60	dsl	750	NATL 50A	850	11,000
CARBON						
Brinkerhoff-Signal	3	dsl	1000	NATL 55	1000	12,000
Exeter Drlg Northern	41	dsl	1000	GAR-DEN 700	1100	12,500
Lord Drlg	1	dsl	2200	OILWELL M860	1650	18,000
Manning, R L	22	dsl	1000	EMSCO A550	1300	11,000
Westburne Drlg	56	dsl	310	NATL T32	275	7,000
CASPER						
Prairie Drlg	5	dsl	1080	EMSCO GB500	1000	10,000
CONVERSE						
Anderson-Myers Drlg	15	dsl	1800	BRWSTR N75A	1800	14,000
Brinkerhoff-Signal	14	dsl	1000	NATL 55	1000	12,500
	21	dsl	1040	EMSCO GC500	1040	11,500
	57	dsl	1560	NATL N80B	1560	16,000
Cyclone Drlg	3	dsl	1250	UNIT U30	1250	15,000
Exeter Drlg Northern	18	dsl	500	NATL 50A	750	9,500
	30	dsl	750	EMSCO D2	1100	12,500
	7	dsl	700	BRWSTR N75	1000	12,500
Harpel Drlg	6	dsl-elec	2000	EMSCO D2	1000	14,000
	3	dsl	1400	IDECO H725	900	10,000
Kenai Drlg Rocky Mountain	35	dsl	800	NATL CA75	1150	14,000
Loffland Bros	163	dsl	1280	NATL 80B	1500	16,000
	234	dsl	1400	M-CSCO U40	1800	13,000
Manning, R L	6	dsl	1290	EMSCO GB800	1290	14,000
Transcontinental Drlg-Denver	38	dsl	1750	GAR-DEN GD800	1836	15,000
CROOK						
True Drlg	15	gas-LPG	1300	NATL 50A	1000	11,500

WYOMING (Cont'd)

Contractor	Rig No	Type Power	Total HP All Main Mud Pumps	Drawworks Make and Model	Total HP Available to Drawwks	Rated Depth with 4½" Pipe
FREMONT						
Anderson-Myers Drlg	1	dsl	680	NATL T32	450	7,000
Atco Drlg	12	dsl	1845	NATL 80B	1845	15,000
	2	dsl	2000	NATL 80B	1000	15,000
Barnhart Drlg	4	dsl	350	GAR-DEN 15W	350	1,500
Brinkerhoff-Signal	72	dsl	2000	NATL 1320UE	2000	25,000
Burris Drlg	117	dsl	800	MAC 400	500	10,500
Dixilyn-Field Drlg	36	dsl	2000	NATL 110UE	2000	18,000
	32	dsl	2300	NATL 130	2331	25,000
	39	dsl	2800	NATL 110UE		18,000
	38	dsl	2000	NATL 110UE	2000	18,000
	33	dsl-elec	2000	OILWELL 940E	3000	20,000
Grace-Bomac Drlg	24	dsl	2400	NATL 110M	2400	20,000
Green Drlg	7	dsl	800	BRWSTR N45M	800	8,000
Loffland Bros	119	dsl-elec	4000	EMSCO CE3000 Type 2	3300	35,000
	223	dsl	1280	M-CSCO U15	1000	10,000
Manning, R L	12	dsl	700	OILWELL 66	560	11,000
	25	dsl	1000	BRWSTR N75	1300	11,500
Parker Drlg	124	dsl	1650	OILWELL 2000E	1650	25,000
Quarles Drlg (OK)	24	dsl	2700	GAR-DEN 1500E	2000	30,000
Shelby Drlg	12	dsl-elec	1600	GAR-DEN 1100ESCR	2000	20,000
Simmons Drlg	41	dsl	350	Hycalog HH6000	350	6,800
Trigg Drlg	6	dsl-elec	2400	UNIT 914E	2400	25,000
Westburne Drlg	69	dsl	1400	NATL 1320M	1600	20,000
HOT SPRINGS						
Barnhart Drlg	2	dsl	600	NATL T20	350	5,000
Exeter Drlg Northern	19	dsl	700	GAR-DEN 800	1100	14,000
Prairie Drlg	1	dsl	500	IDECO H35	475	7,000
JOHNSON						
Enopco	3	dsl	1620	NATL 80B	1620	17,500
Loffland Bros	40	dsl	1980	BRWSTR N96	2000	18,000
Manning Co, R L	34-E	dsl-elec	1600	EMSCO D3	1000	16,500
LARAMIE						
Atco Drlg	20	dsl	800	EMSCO GB500	800	10,000
Exeter Drlg Northern	42	dsl	375	NATL T32	460	7,800
LINCOLN						
Forwest	6	dsl-el-scr	2600	NATL 110UE	2000	20,000
Loffland Bros	89	dsl-elec	2100	M-CSCO U1220EB	2400	25,000
	80	dsl-elec	1800	M-CSCO U712A	2000	17,000
Manning, R L	29	dsl	800	EMSCO GB500	934	9,000
Noble Drlg	132	dsl-elec	3300	NATL 1320UE	3300	25,000
Norton Drlg	10	dsl	750	GAR-DEN 700	1070	15,000
Parker Drlg	163	dsl	1650	OIME SL1500	1650	20,000
	92	dsl	1650	NATL 100M	1650	16,000
True Drlg	24	dsl	1400	M-CSCO U914C	2400	22,000
	25	dsl	2100	M-CSCO U914C	2100	22,000
	16	gas-LPG	1300	NATL 50A	1000	11,000
	9	dsl	1300	M-CSCO U40	1200	15,000
NATRONA						
Burris Drlg	114	dsl	1500	GAR-DEN 1100	1500	20,000
	112	dsl	1500	GAR-DEN 1100	1500	20,000
Dixilyn-Field Drlg	34	dsl-elec	3200	NATL 1320UE	2500	25,000
	41	dsl	3200	NATL 1320UE	2000	20,000
	31	dsl-elec	2300	NATL 1320UE	5000	25,000
	40	dsl	1600	NATL C206		15,000
Exeter Drlg Northern	5	dsl	300	M-CSCO U34D	300	6,000
	13	dsl	360	BRWSTR N4	300	6,000
Loffland Bros	97	dsl-elec	3300	M-CSCO U1220EB	3300	30,000
	70	dsl-elec	3300	M-CSCO U1220EB	2200	25,000
	208	dsl	1560	NATL 110	1800	17,000
Parker Drlg	118	dsl	1650	NATL 100M	1650	20,000
NIOBRARA						
Cathey Drlg, M L	101	dsl	900	IDECO H35KC	640	8,000
Horpel Drlg	5	dsl	1250	BRWSTR N42	700	8,500
Westburne Drlg	72	dsl	720	NATL T32	380	7,500
PARK						
Anderson-Myers Drlg	11	dsl	1200	NATL 55	1200	13,000
	4	dsl	1200	EMSCO GA500	1200	11,000
Atco Drlg	25	dsl	700	IDECO H525	700	9,500
Barnhart Drlg	3	dsl	600	IDECO H35	350	6,000
Manning, R L	8	dsl	850	EMSCO GA500	860	9,000
	28	gas-btne	800	EMSCO GB350	506	7,500
	16	gas-btne	640	NATL T32	458	6,500
	15	dsl	700	NATL 55	700	11,000
	17	gas-btne	770	EMSCO GC500	910	11,000
Penrod Drlg	115	dsl	1600	NATL 1625ME	3000	30,000
Roden Drlg, J B	6	dsl	750	NATL CA75	750	13,000
	1	dsl	636	EMSCO GB350	640	8,500
Simmons Drlg	36	dsl	350	Hycalog HH600P	350	6,800
Wyoming Well Serv	30	dsl	300	Crdwll 200A	318	4,500
	21	dsl	300	IDECO H35	318	5,000
	24	dsl	300	Crdwll 200A	318	4,500
RICHLAND						
Atco Drlg	10	dsl-elec	2000	NATL 80UE	1000	15,000

WYOMING (Cont'd)

Contractor	Rig No	Type Power	Total HP All Main Mud Pumps	Drawworks Make and Model	Total HP Available to Drawwks	Rated Depth with 4½" Pipe
SUBLETTE						
Brinkerhoff-Signal	12	dsl	1080	NATL 55	1080	12,000
Exeter Drlg Northern	28	dsl	1200	GAR-DEN 800	1275	15,000
Helmerich & Payne Intl Drlg	81	dsl-scr	2200	NATL 110UE	1500	20,000
Loffland Bros	325	dsl	2160	GAR-DEN 2100	2400	25,000
	106	dsl	2180	BRWSTR N12A	2400	25,000
Parker Drlg	169	dsl	1650	OIME SL1000P	1650	20,000
	171	dsl	1650	OIME 1500P	1650	20,000
	56	dsl	1000	OIME SDS	1000	12,500
Roden Drlg, J B	7	dsl	350	BDW 450T	520	8,000
Shelby Drlg	51-E	dsl-elec	1000	IDECO 725ESCR	750	11,000
True Drlg	14	dsl	1200	NATL 50A	1200	12,000
Viersen & Cochran Drlg	9	dsl	2150	NATL 110	2400	20,000
SWEETWATER						
Brinkerhoff-Signal	79	dsl	550	NATL 370	800	8,500
Exeter Drlg Northern	11	dsl	750	GAR-DEN 700	1080	12,500
	31	dsl	1000	GAR-DEN 800	1650	15,000
Grace-Bomac Drlg	43	dsl	1100	GAR-DEN 700M	1100	12,500
Manning, R L	20	dsl	1050	EMSCO J1000	1290	14,000
	26	gas-btne	1156	EMSCO GB800	1385	14,000
Montgomery Mountain Drlg	32	dsl-elec	2700	NATL 110UE	2000	18,000
Norton Drlg	6	dsl	750	WILSON 75	900	13,000
Penrod Drlg	23	dsl	2600	NATL	1950	25,000
Rio Grande Drlg	28	dsl	1000	BRWSTR N96	2300	18,000
	26	dsl	750	BRWSTR N75	1030	14,500
Roden Drlg, J B	5	dsl	650	EMSCO GB350	650	10,500
	3	dsl	1575	OIME 1500SL	1575	18,000
Signal Oilfield Serv	28	dsl	735	CABOT/FRANKS 600	750	9,000
TETON						
Loffland Bros	30	dsl-elec	2160	M-CSCO 914EC	2200	20,000
Montgomery Mountain Drlg	44	dsl	2000	OILWELL 96	1000	20,000
UINTA						
Anderson-Myers Drlg	7	dsl	1200	NATL 55	1400	13,000
	12	dsl	1500	OIME 1500	1500	17,000
	17	dsl	2300	NATL 110	2300	22,000
	14	dsl	1800	BRWSTR N75A	1800	14,000
Apollo	16	dsl	1155	NATL 80B	1220	12,500
Brinkerhoff-Signal	86	dsl	1000	NATL 80B	1500	16,000
	26	dsl	1170	NATL 55	1170	10,500
	40	dsl	2400	NATL 130UE	3000	25,000
	73	dsl	1500	NATL 80B	1500	15,000
	7	dsl	1500	NATL 80B	1500	15,000
Burris Drlg	111	dsl	1500	GAR-DEN 1100	1500	20,000
Challenger Drlg	24	dsl	500	BRWSTR N4A	650	6,500
	27	dsl	300	NATL T12	500	4,500
	25	dsl	300	NATL T20	600	5,000
Exeter Drlg Northern	29	dsl	1200	GAR-DEN 800	1125	15,000
	24	dsl	1000	GAR-DEN 800	1100	15,000
Forwest	2	dsl-el-scr	2600	IDECO E2100	1800	22,000
	1	dsl-el-scr	2600	IDECO E2100	1800	22,000
Grace-Bomac Drlg	44	dsl	1650	GAR-DEN 800	1650	16,000
	29	dsl	2400	NATL 110M	2400	20,000
	90	dsl-elec	2400	NATL 110UE	2000	20,000
Loffland Bros	184	dsl	2180	M-CSCO U712A	2400	15,000
	8	dsl	2100	M-CSCO U914C	2400	20,000
	214	dsl	1980	M-CSCO U40	1800	13,000
Lord Drlg	2	dsl	2200	OILWELL M860	1650	18,000
	3	dsl	2200	OILWELL M860	1650	18,000
Manning Co, R L	35-E	dsl-elec	2100	EMSCO C1	1500	19,500/5"
Manning, R L	21	dsl	1095	NATL 80B	1385	15,000
	14	dsl	1700	NATL 110	1500	18,000/5"
	33	dsl-elec	1950	EMSCO C1	1500	19,500/5"
	7	gas-btne	750	EMSCO G800	750	8,500
Montgomery Mountain Drlg	5	dsl-elec	2700	NATL 1320UE	3645	25,000
Nicor Drlg	66	dsl	2000	M-CSCO U712A	1200	16,000
Noble Drlg	E1101	dsl	2130	EMSCO A1100	2130	18,000
	N-116	dsl	3000	NATL 110UE	3000	20,000
Parker Drlg	117	gas	2000	NATL 110	2000	22,000
	173	dsl	1650	OIME 1500P	1650	20,000
Rio Grande Drlg	5	dsl	1300	NATL 110	2400	20,000
	27	dsl	750	BRWSTR N75	1030	14,500
	10	elec	1300	NATL 1320UE	1185	25,000
Sabre Inc	2	dsl	671	WILSON Mogul 42	671	5,000
Signal Oilfield Serv	27	dsl	1025	CABOT/FRANKS 600	750	9,000
	1	dsl	560	CABOT/FRANKS 750	700	8,500
Viersen & Cochran Drlg	14	dsl	2300	EMSCO 800A	1554	18,000
WESTON						
Farnsworth & Kaiser Drlg	6	dsl	430	M-CSCO U34	430	6,500
	3	dsl	300	Joy 300	330	4,000
	1	dsl	900	M-CSCO U16	900	8,000
Green Drlg	3	dsl	1350	EMSCO GB500	900	12,000
L & R Drlg	4	dsl	480	CABOT/FRANKS Rochet	195	3,000
Transcontinental Drlg-Denver	51	dsl	1100	OILWELL 76	1300	12,500
	55	dsl	810	OILWELL 76	980	12 000
True Drlg	18	dsl	390	EMSCO GB250T	360	6,500

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Canadian Contract Rotary Land Drilling Rigs

Contractor	Rig No	Type Power	Total HP All Main Mud Pumps	Drawworks Make and Model	Total HP Available to Drwwks	Rated Depth with 4½" Pipe
ALBERTA						
UNDESIGNATED						
Argus Drlg Div Taro Inds	7	dsl	320	NATL T32	327	8,000
	4	dsl	320	M-CSCO U34	319	6,000
	5	dsl	1180	OILWELL 76	1326	11,800
	1	dsl	320	NATL T32	327	7,000
	2	dsl	320	EMSCO 250T	327	6,500
	3	dsl	330	M-CSCO U34	319	6,000
Baltic Drlg	3	dsl	1000	Superior 700	600	9,500
	12	dsl	525	NATL T32	326	7,500
	14	dsl	880	NATL 50AM	550	9,500
Bawden Drlg, Peter	1	mech	1000	EMSCO GB500	600	8,500
	33	mech	1650	OILWELL 860	1400	16,000
	25	dsl-scr	2800	EMSCO C1 Type II	1900	18,000
	16	mech	1680	EMSCO D3	1000	12,000
	17	mech	1180	GAR-DEN 500	500	9,000
	20	mech	1000	GAR-DEN 500	500	9,000
	12	mech	1700	EMSCO D3	1000	16,000
Beaver Drlg	1	dsl	300	NATL T32	300	7,000
	8	dsl	300	NATL T32	300	7,000
	9	dsl	560	NATL 370	560	9,500
	7	dsl	560	NATL 370	560	9,500
	4	dsl	300	NATL T32	300	7,000
	5	dsl	300	NATL T32	300	7,500
	6	dsl	300	NATL 370	550	8,500
	3	dsl	300	NATL T20	300	6,000
	2	dsl	300	NATL T20	300	6,000
Blocker Drlg	56					16,000
	57					14,000
	59					14,000
	60					10,000
ALBERTA (Cont'd)						
Bow Island Drlg	1	dsl	278	Wlkr-Nr 2000	175	3,000
	18	dsl	278	NATL T12	278	5,000
	5	dsl	3000	Wlkr-Nr 2000	175	3,000
	10	dsl	278	Wlkr-Nr 2000	175	3,000
	11	dsl-elec	300	Wlkr-Nr	300	5,000
	17	dsl	278	NATL T12	278	5,000
	7	dsl	278	Wlkr-Nr 2000	175	3,000
	8	dsl	278	Wlkr-Nr 2000	175	3,000
	6	dsl	278	Wlkr-Nr 2000	175	3,000
	3	dsl	278	Wlkr-Nr 2000	175	3,000
	4	dsl	278	Wlkr-Nr 2000	175	3,000
	2	dsl	278	Wlkr-Nr 2000	175	3,000
Brelco Drlg	1	dsl	800	OILWELL 700	900	12,000
	4	dsl	600	OILWELL 500	750	9,000
	6	dsl	800	OILWELL 500	750	9,000
	7	dsl	800	OILWELL 700	900	12,000
	5	dsl	600	OILWELL 500	750	9,000
	3	dsl	600	OILWELL 500	750	9,000
	2	dsl	800	OILWELL 700	900	12,000
Cactus Drlg	19	dsl	500	MAC 300	500	6,500
	26	dsl-elec	2700	EMSCO D3	500	18,000
	28	dsl	1200	BRWSTR N75	1200	12,500
	24	dsl	300	BETH S55	300	6,000
	25	dsl-elec	3400	EMSCO C2	2000	20,000
	20	dsl	1200	EMSCO D2	1200	14,000
	15	dsl	750	EMSCO GC350	750	6,500
	17	dsl	500	MAC 300	500	6,500
	18	dsl	500	MAC 300	500	6,500
	16	dsl	500	MAC 300	500	6,500
	14	dsl	750	EMSCO GB500	750	8,000
	11	dsl	350	M-CSCO U34	350	6,500
	9	dsl	350	M-CSCO U34	350	6,500

ALBERTA (Cont'd)

Contractor	Rig No	Type Power	Total HP All Main Mud Pumps	Drawworks Make and Model	Total HP Available to Drwwks	Rated Depth with 4½" Pipe
UNDESIGNATED (Cont'd)						
Cactus Drlg	10	dsl		NATL T32	700	7,800
	7	dsl	700	EMSCO GB350	700	8,500
	8	dsl	350	M-CSCO U34	350	6,500
	5	dsl	1554	IDECO Super 711	1554	15,000
	6	dsl	900	Crdwll AO	900	9,500
	3	dsl	350	M-CSCO U34	350	6,500
	4	dsl	350	M-CSCO U34	350	6,500
	1	dsl	750	BRWSTR N55	750	8,500
	2	dsl	940	NATL 55	940	11,500
Can-Tex Drlg & Expl	5	dsl	1200	EMSCO GB800	1200	12,000
	7	dsl	1000	EMSCO D2	900	12,000
	10	dsl	800	NATL 370	450	8,000
	8	dsl	820	OILWELL 66	820	9,000
	6	dsl	1400	EMSCO GB80083	1275	14,000
Capri Drlg	1	dsl	500	IDECO H30D	350	6,000
	6	dsl	900	NATL 50A	1350	10,000
	7	dsl	450	TSM-3000	300	2,500
	4	dsl	450	NATL T12	300	4,000
	5	dsl	700	NATL T32	700	8,500
	2	dsl	450	IDECO H25	350	6,000
	3	dsl	450	IDECO H25D	350	6,000
Centennial Drlg	1	dsl	360	NATL T12	350	4,500
	3	dsl	480	NATL T32	650	8,500
	2	dsl	360	EMSCO 250GA	350	6,000
Challenger Drlg-Calgary	1	dsl	1200	EMSCO GC500	1300	12,500
	JB9E	elec-scr	2400	NATL 80UE	2800	15,000
	51	dsl	1630	NATL 110	1980	19,000
	55	dsl	1180	NATL 100HD	1470	16,500
	44	dsl	1300	NATL 80B	1950	15,000
	50	dsl	2000	NATL 110	2385	19,000
	5-E	dsl-elec	1220	NATL 55	1830	12,500
	11	dsl	350	NATL T20	456	5,700
	22	dsl	1630	NATL 110	1980	19,000
	39	dsl	350	NATL T20	456	5,750
	15	dsl	800	IDECO Sup 711	1300	12,500
	8-E	dsl-elec	1500	NATL 80E	2250	14,500
	10-E	elec-scr	2600	Unit 1220EB	2800	22,000/5"
	6-E	dsl-elec	1500	NATL 80E	2250	14,500
	2	dsl	650	NATL T45	608	9,000
	4-E	dsl-elec	1170	NATL T45	1005	9,000
Challenger Drlg-Edmonton	5-E	dsl-elec	1220	NATL 55	1830	12,500
	51	dsl	1630	NATL 110	1980	19,000
	55	dsl	1180	NATL 100HD	1470	16,500
	8-E	dsl-elec	1500	NATL 80E	2250	14,500
	50	dsl	2000	NATL 110	2385	19,000
Comanche Drlg Ltd	1	dsl		Failing Model 90		
	8	dsl		Failing STRG90		
	5	dsl		BRWSTR N45		
	7	dsl		NATL 370		
	2	dsl		BRWSTR N4		
Garnett Drlg	5	dsl	900	BRWSTR N55	900	10,000
	9	dsl	1200	BRWSTR N7	900	11,000
	10	dsl	1400	NATL 610	900	11,500
	7	dsl	1600	NATL 610	1200	12,000
	8	dsl	300	OILWELL 52T	400	6,000
	6	dsl	1100	M-CSCO	900	12,000
	3	dsl	900	Crdwll J700	900	12,000
Jade Drlg	1	dsl	450	WILSON Super 38	300	3,500
	4	dsl	625	IDECO H25	430	7,500
	5	dsl	500	IDECO H30	420	7,500
	2	dsl	400	WILSON Super 38	300	3,500
	3	dsl	550	IDECO H25	360	7,500
Laredo Drlg	8	dsl	500	TSM 6000	440	2,300
	6	dsl	300	MAC 300	300	2,000
	5	dsl	300	MAC 300	300	2,000
	4	dsl	300	MAC 300	300	2,000
	2	dsl	300	MAC 300	300	2,000
	1	dsl	300	MAC 300	300	2,000
Lemkco Drlg	2	dsl	800	OIME SD3SL	800	10,000
Loffland Bros	9	dsl-elec	2000	M-CSCO U914	1980	20,000
	72	dsl	1700	M-CSCO U914	2880	20,000
	36	dsl	2000	M-CSCO U914C	2880	20,000
	171	dsl-elec	2132	M-CSCO U914B	1700	18,000
	93	dsl-elec	2100	M-CSCO U1220EB	2400	25,000
	198	dsl	1400	M-CSCO U914A	1599	18,000
Montgomery Drlg Canada	46	dsl-elec	2000	NATL 1320UE	2000	20,000
	42	dsl-elec	2000	NATL 110UE	2000	20,000
	49	dsl-elec	2000	NATL 110E	2000	20,000
	41	scr	1350	NATL 1320UE	2000	23,000
Nabors Drlg	5	dsl	700	OILWELL 76	1326	12,000
	4	dsl	2000	OILWELL 76	1740	14,000
	24-E	dsl-elec	2000	EMSCO Electrohiost 2C	2925	14,000
	23-E	dsl-elec	1600	EMSCO D2	1800	14,000
	15	dsl	1200	EMSCO A550	884	11,000
	6	dsl	300	IDECO H35	300	6,000
	14-E	dsl-elec	1714	EMSCO D3	2925	15,000
	21-E	dsl-elec	3200	EMSCO IIC	3900	20,000
	19-E	dsl-elec	2000	EMSCO CI	3800	20,000
	16	dsl	2000	EMSCO A800	1740	15,000
Parker Drlg	98	dsl	1500	NATL 100	1000	17,000
Regent Drlg	17-E	dsl	2700	GAR-DEN	1000	14,000
	21	dsl	2200	OILWELL M2000	2592	20,000
	24	dsl	800	BRWSTR N4	900	9,500
	23	dsl	800	BRWSTR N4	820	9,500
	22	dsl	830	M-CSCO U36A	500	8,500
	25	dsl	1400	BRWSTR N45	1400	14,000
	16-E	dsl	2700	GAR-DEN 800E	1000	14,000

ALBERTA (Cont'd)

Contractor	Rig No	Type Power	Total HP All Main Mud Pumps	Drawworks Make and Model	Total HP Available to Drwwks	Rated Depth with 4½" Pipe
UNDESIGNATED (Cont'd)						
Regent Drlg	15-E	dsl	2700	GAR-DEN 1500	2000	21,000
	14-E	dsl	2800	OILWELL 840E	1800	20,000
	11	dsl	2200	OILWELL 840-E	2592	20,000
	10	dsl	830	BRWSTR N4	900	9,500
	8	dsl	1800	GAR-DEN 1100	2100	15,000
	5	dsl	840	BRWSTR N4	820	9,500
	9	dsl	1400	BRWSTR N45	1400	14,000
	4	dsl	840	BRWSTR N4	900	9,500
	1	dsl	675	IDECO H40	330	7,500
	29	dsl	350	BRWSTR N4	365	6,000
Rocky Mountain Drlg	1	dsl	650	NATL 370	660	8,500
	3	dsl	1650	NATL 80	1650	15,000
	2	dsl	1150	GAR-DEN 500	700	8,500
S & T Drlg Northern	6	dsl	1100	NATL 610	1100	11,500
	1	dsl	1100	NATL 55	1100	11,500
Sabre Inc	1	dsl	671	M-CSCO U34	671	6,500
Sedco Drlg	77	dsl	375	Superior 400	456	6,000
	71	dsl	350	Superior 400	456	6,000
	86	dsl	175	Kremco K-600D	450	[illegible]
	83	dsl	350	Crdwll 150A	318	4,200
	84	dsl	320	Superior 300	318	4,500
	82		375	Superior 300	318	4,500
	80	dsl	375	Shaffer 6000	456	6,000
	81	dsl	375	Superior 400	318	6,000
	92	dsl	350	Superior 400	456	5,000
	89	dsl	350	IDECO H30D	318	5,000
	88	dsl	350	Crdwll S350	350	5,500
	70	dsl	318	GAR-DEN 3000	318	4,000
	87	dsl	300	Crdwll Model L	318	4,000
	91	dsl	330	EMSCO GB250	456	6,500
	93-E	dsl-elec	375	Superior 400	210	6,500
	95	dsl	300	Superior 400	456	6,000
	97	dsl	300	NATL T32	456	6,000
	99	dsl	350	EMSCO GA250	456	6,500
Shelby Drlg	8	dsl	1200	OIME 750SL	1200	14,000
	2	dsl		Cooper 300DD		5,000
	1	dsl		Cooper 300DD		5,000
Simmons Drlg	11	dsl	350	Hycalog HH-6000	350	6,800
	19	dsl	575	Troy M600	535	7,500
	8	dsl	450	Troy 600	700	10,000
	12	dsl-elec	1200	GAR-DEN 500-E	700	9,000
Three Hundred Drlg	Mr Gary	dsl	1200	Superior 700	785	9,500
	Mr Jim	dsl	1200	NATL 370M	900	9,500
	Mr Digger	dsl	900	NATL 370M	900	9,500
	Mr Nick	dsl	1200	Superior 700	785	9,500
Tri-City Drlg	3	dsl	250	Failing 2500	200	3,000
	1	dsl	250	Failing 2500	200	3,000
	4	dsl	300	Failing Stratmaster 90	280	5,000
	10	dsl	300	Superior 300	300	4,500
	5	dsl	250	Failing 2500	210	3,000
Trumark Drlg Serv	C3	dsl	240	NATL T8	240	2,500
Worldwide Energy	1	dsl	456	Failing 2500	304	3,000
ATHABASCA						
Guthrie McLaren Drlg	6	dsl	300	Failing 2500A	225	3,000
BASHAW						
Guthrie McLaren Drlg	8	dsl	300	Failing 2500A	225	3,000
BAY TREE						
Red Arrow Drlg	3	dsl	225	NATL T20	275	6,000
BEAVERLODGE						
Kenting Drlg	28	dsl	700	NATL 370	700	9,000
BOUNDARY LAKE						
Westburne Drlg Canada	26	dsl	360	NATL T32	360	7,000
BRAZEAU RIVER						
Adeco Drlg & Engr	15	dsl	365	NATL T45	575	10,500
BRETON						
Precision Drlg	14	dsl	350	IDECO H40	500	7,500
BROOKS						
Guthrie McLaren Drlg	7	dsl	300	NATL T32	300	7,000/3.5"
	12	dsl	325	Superior S400	300	6,200
Precision Drlg	8	dsl	350	IDECO H30D	350	6,500
	1	dsl	380	IDECO H30FD Super	350	6,500
CALGARY						
Arrowhead Drlg	C-8	dsl	1040	NATL 610	1040	12,000
CAROLINE						
Arrowhead Drlg	C-6	dsl	770	NATL 370	770	9,000
	C-4	dsl	1040	NATL 610	1040	12,000
Kenting Drlg	29	dsl	1040	NATL 610	1040	12,000
CARROT CREEK						
Adeco Drlg & Engr	18	dsl	700	OIME Helihoist 500C	1370	2,300
CESSFORD						
Westburne Drlg Canada	35	dsl	310	Failing 2500	160	3,000

ALBERTA (Cont'd)

Contractor	Rig No.	Type Power	Total HP All Main Mud Pumps	Drawworks Make and Model	Total HP Available to Drwwks	Rated Depth with 4½" Pipe
CHERHILL						
Hi Tower Drig	11	dsl	350	Superior 400	540	6,500
COKREAN						
Precision Drig	5	dsl	350	IDECO H525D	350	7,500
COLD LAKE						
Ensign Drig	2	dsl	440	EMSCO	440	1,980
	1	dsl	440	CABOT/FRANKS 42	290	11,000
CUTOFF CREEK						
Adeco Drig & Engr	8	dsl	1500	NATL 100M	2340	18,000
CYNTHIA						
Kenting Drig	32-E	dsl-elec	3720	NATL 110UE	2000	18,000
	27	dsl	1040	NATL 610	1040	12,000
DRAYTON VALLEY						
Precision Drig	4	dsl	350	IDECO H30D	350	7,200
EDMONTON						
Westburne Drig Canada	37	dsl	360	GAR-DEN 2500	170	3,500
EDSON						
Atco Drig Mustang Div	35	dsl	820	NATL T45	820	9,000
	42	dsl	650	IDECO H35	700	7,500
Hi Tower Drig	1	dsl-elec	3600	NATL 1320UE	2000	20,000
	18	dsl-elec	1800	OILWELL 760	1000	15,000
Kenting Drig	3	dsl	1000	EMSCO GC500	1000	12,000
FLAGSTAFF						
Tri-City Drig	9	dsl	300	Dreco 300	300	4,500
FORESTBURG						
Badger Drig	1	dsl	300	IDECO H30	250	5,000
FOX CREEK						
Guthrie McLaren Drig	9	dsl	1940	OIME 1500	1940	18,000
Kenting Drig	22-E	dsl-elec	2000	NATL 80UE	1000	13,000
GARRINGTON						
S & T Drig	7	dsl	1150	NATL T45	800	9,500
GRAND CACHE						
Hi Tower Drig	20	dsl-elec	1800	OILWELL 760	1000	15,000
Jomax Drig	7	dsl-elec	2400	OILWELL 760	1600	5,000
GRAND PRAIRIE						
Hi Tower Drig	21E	dsl-elec	3200	EMSCO D3	1000	15,000
GRANDE PRAIRIE						
Arrowhead Drig	C-10	dsl	1560	NATL 80B	1560	15,000
Kenting Drig	24	dsl	350	NATL 370	350	9,000
S & T Drig	5	dsl	1150	NATL 50A	800	9,500
GRIMSHAW						
Westburne Drig Canada	15	dsl	900	BRWSTR N4	800	8,500
HARMATTEN						
Hi Tower Drig	3	dsl	900	OILWELL 66	1020	10,000
HIGH LEVEL						
S & T Drig	4	dsl	700	NATL 50CA	400	8,000
HINTON						
Arrowhead Drig	C-5	dsl	1560	NATL 80B	1560	15,000
HYTHE						
Arrowhead Drig	C-7	dsl	1040	NATL 610	1040	12,000
INNISFAIL						
Adeco Drig & Engr	19	dsl	308	NATL T32M	320	2,500
Guthrie McLaren Drig	3	dsl	680	NATL 50CA	600	10,000
KASTOR						
Precision Drig	6	dsl	350	IDECO H30	350	6,500
KITSCOTY						
Westburne Drig Canada	32	dsl	300	Failing 2500	210	3,000
LAC ST ANNE						
Red Arrow Drig	5	dsl	225	NATL T20	275	6,000
LANAWAY						
Adeco Drig & Engr	3	dsl	308	NATL T32	320	7,000
LEDUC						
Red Arrow Drig	7	dsl	225	RAD 200	275	6,000
LOON LAKE						
Adeco Drig & Engr	16	dsl	308	NATL T32	312	7,000
MEANDER RIVER						
Adeco Drig & Engr	12	dsl	312	NATL T32	320	7,000
MICHICHI						
Atco Drig Mustang Div	41	dsl	300	IDECO H30F	350	6,000

ALBERTA (Cont'd)

Contractor	Rig No.	Type Power	Total HP All Main Mud Pumps	Drawworks Make and Model	Total HP Available to Drwwks	Rated Depth with 4½" Pipe
MINBURN						
Tri-City Drig	8	dsl	300	Failing 3500	280	3,500
	6	dsl	250	Failing 2500	210	3,000
	2	dsl	300	M-CSCO U34	3000	6,000
MISKU						
Atco Drig Mustang Div	56	dsl	500	IDECO H35	365	6,500
MITSUE						
Westburne Drig Canada	12	dsl	600	EMSCO GA350	600	8,000
	8	dsl	380	IDECO H40D	380	7,000
MORINVILLE						
Red Arrow Drig	8	dsl	225	RAD 200	275	6,000
MORRIN						
Badger Drig	4	dsl	400	Superior 400	430	5,500
MUSKEG						
Jomax Drig	6	dsl-elec	2400	OILWELL 760	1600	5,000
NEMBLEY						
Hi Tower Drig	2	dsl	780	OILWELL 66	800	9,500
NISKU						
Kenting Drig	30-E	dsl-elec	3000	NATL 1320UE	2000	20,000
OKOTOKS						
Arrowhead Drig	C-1	dsl	1040	NATL 610	1040	12,000
ORION						
Westburne Drig Canada	38	dsl	310	Failing 2500	160	3,000
PADDLER						
Atco Drig Mustang Div	39	dsl	300	NATL T20	300	6,000
PARKLAND						
Hi Tower Drig	7	dsl	1000	OILWELL 66	1100	10,000
PEACE RIVER						
Guthrie McLaren Drig	2	dsl	300	BRWSTR N4	300	6,500/3.5"
Jomax Drig	2	dsl	800	OILWELL 52T	455	2,600
	3	dsl	800	OILWELL 52T	455	2,600
	1	dsl	800	OILWELL 52T	455	2,600
Red Arrow Drig	1	dsl	225	NATL T20	275	6,000
PEMBINA						
Atco Drig Mustang Div	45	dsl-elec	1500	NATL 610E	750	12,000
	54	dsl	715	IDECO H35D	650	7,500
S & T Drig	3	dsl	1200	NATL 55	1200	11,500
PENDRYL						
Westburne Drig Canada	42	dsl	380	NATL T20	380	5,500
POUCE COUPE						
Atco Drig Mustang Div	53	dsl	735	NATL T45	650	9,000
RAINBOW LAKE						
Hi Tower Drig	19	dsl	620	OILWELL 52T	545	7,000
RED DEER						
Guthrie McLaren Drig	11	dsl	450	Dreco 500	450	7,000
Kenting Drig	9	dsl	720	NATL T32	720	7,500
Precision Drig	16	dsl	700	EMSCO PD650	650	10,000
Red Arrow Drig	4	dsl	225	RAD 200	275	6,000
RED EARTH						
Atco Drig Mustang Div	50	dsl	300	IDECO H30F	350	6,000
S & T Drig	10	dsl	350	UNIT 34	350	6,000
ROCKY MOUNTAIN HOUSE						
Arrowhead Drig	C-11	dsl	1560	NATL 80B	1560	15,000
Precision Drig	9	dsl	350	IDECO H30D	350	7,500
SEAL						
Atco Drig Mustang Div	40	dsl	700	BRWSTR N45	650	8,500
SINCLAIR						
Atco Drig Mustang Div	36	dsl	300	IDECO H30AD	300	5,500
SLAVE LAKE						
Guthrie McLaren Drig	4	dsl	375	Dreco D500	450	7,000
Kenting Drig	37	dsl	350	Superior 400	700	7,500
Precision Drig	15	dsl	350	IDECO H30FD	350	7,500
Red Arrow Drig	6	dsl	225	RAD 200	275	6,000
SPIRIT RIVER						
Jomax Drig	5	dsl	875	NATL 50A	875	10,500
SPRINGBURN						
Westburne Drig Canada	28	dsl	380	NATL 55	980	11,000

ALBERTA (Cont'd)

Contractor	Rig No	Type Power	Total HP All Main Mud Pumps	Drawworks Make and Model	Total HP Available to Drawwks	Rated Depth with 4½" Pipe
ST PAUL						
Westburne Drlg Canada	33	dsl	310	Failing 3500	180	3,500
STAVELY						
Westburne Drlg Canada	10	dsl	1275	NATL 80	1275	13,000
STETTLER						
Precision Drlg	10	dsl	350	IDECO H35D	350	7,200
SUNDRE						
Arrowhead Drlg	C-2	dsl	770	NATL 370	770	9,000
	C-9	dsl	1040	NATL 610	1040	12,000
Blocker Canada	6	dsl	1000	OIME 1000SL	1500	16,000
Jomax Drlg	4	dsl	1200	OILWELL 76A	1275	4,300
SYLVAN LAKE						
Badger Drlg	2	dsl	400	NATL 370	500	7,200
THREE HILLS						
Red Arrow Drlg	9	dsl	225	RAD 200	275	6,000
S & T Drlg	2	dsl	350	NATL T32	350	7,000
Westburne Drlg Canada	50	dsl	240	Failing 2500	180	3,000
TINDISTOLL						
Adeco Drlg & Engr	1	dsl	308	NATL T20	320	1,700
TOMAHAWK						
Westburne Drlg Canada	24	dsl	360	NATL T32	300	7,000
TWINNING						
Badger Drlg	6	dsl	400	NATL 370	500	7,500
VALHALLA						
Westburne Drlg Canada	4	dsl	1040	EMSCO GC500	1040	11,000
VALLEYVIEW						
Hi Tower Drlg	10	dsl	1150	OILWELL 76	1220	10,000
Kenting Drlg	18	dsl	800	NATL 50A	800	9,500/5"
VERMILION						
Tri-City Drlg	7	dsl	250	Failing 2500	210	3,000
WABASCA						
Westburne Drlg Canada	39	dsl	310	Failing 3500	235	3,500
WETASKIWIN						
Adeco Drlg & Engr	14	dsl	312	NATL T32	320	7,000
Kenting Drlg	23-E	dsl-elec	2000	NATL 610E	1000	11,500
WHITECOURT						
Kenting Drlg	4	dsl	720	610	720	11,500
WILDWOOD						
Precision Drlg	11	dsl	350	IDECO H40PD	350	7,200
Red Arrow Drlg	10	dsl	225	RAD 200	275	1,850
WINFIELD						
Precision Drlg	7	dsl	350	IDECO H30D	400	8,000
	12	dsl	500	IDECO H30D	350	7,500
WOOD RIVER						
Atco Drlg Mustang Div	31	dsl	815	BRWSTR N45	720	8,500
WORSLEY						
Kenting Drlg	10	dsl	720	OILWELL 66	720	10,000
ZAMA						
Guthrie McLaren Drlg	10	dsl	300	Superior D500	450	7,000
Kenting Drlg	15	dsl	720	NATL 370	720	9,000
ZAMA LAKE						
S & T Drlg	9	dsl	800	NATL 370	800	8,500
Westburne Drlg Canada	17	dsl	1080	EMSCO GB350	720	8,000

BRITISH COLUMBIA

Contractor	Rig No	Type Power	Total HP All Main Mud Pumps	Drawworks Make and Model	Total HP Available to Drawwks	Rated Depth with 4½" Pipe
UNDESIGNATED						
Baltic Drlg	24	dsl	300	NATL T20	326	6,500
	25	dsl	475	NATL T20	326	6,500
	2	dsl	1600	NATL 80B	1850	15,000
Bawden Drlg, Peter	8	dsl-elec	2200	OILWELL 860	1400	20,000
Loffland Bros	3	dsl	1850	M-CSCO U914A	2880	18,000
Nabors Drlg	3	dsl	1700	OILWELL 76	1326	14,000
Parker Drlg	94	dsl	1700	NATL 100M	1000	18,000
Regent Drlg	3	dsl	840	BRWSTR N4	900	9,500
	2	dsl	840	BRWSTR N55	820	9,500
	26	dsl	840	IDECO H40	330	7,500
	12-E	dsl	2200	GAR-DEN 1500	2502	20,000
DAWSON CREEK						
Adeco Drlg & Engr	2	dsl	380	OIME SD3	365	8,500
Nabors Drlg	9	dsl	2000	NATL 110	2250	18,000
FORT NELSON						
Hi Tower Drlg	17	dsl	580	NATL 50A	340	7,000
Kenting Drlg	7	dsl	720	EMSCO GC500	720	10,500

BRITISH COLUMBIA (Cont'd)

Contractor	Rig No	Type Power	Total HP All Main Mud Pumps	Drawworks Make and Model	Total HP Available to Drawwks	Rated Depth with 4½" Pipe
FORT ST JOHN						
Adeco Drlg & Engr	6	dsl	1500	NATL 100M	2340	18,000
Guthrie McLaren Drlg	1	dsl	300	OILWELL 52T	400	7,000
Hi Tower Drlg	14	dsl	280	OILWELL 52T	350	6,5[illegible]
Westburne Drlg Canada	14	dsl	1080	NATL 50A	1080	[illegible],500
MILLIGAN CREEK						
Hi Tower Drlg	12	dsl	280	NATL T32	338	6,500
PEMBERTON						
Westburne Drlg Canada	1	dsl	1580	NATL 80B	1560	13,000
SIKAMI						
Westburne Drlg Canada	22	dsl	1010	NATL 50A	700	8,500

MANITOBA

Contractor	Rig No	Type Power	Total HP All Main Mud Pumps	Drawworks Make and Model	Total HP Available to Drawwks	Rated Depth with 4½" Pipe
KIRKELLA						
Crown Drlg	2	dsl	784	Spencer 5000	476	5,000
WASKADA						
Crown Drlg	4	dsl	714	Unit 34	362	6,000
Red Arrow Drlg	2	dsl	225	NATL T12	275	5,000
	12	dsl	225	RAD 200	275	1,850
	11	dsl	225	RAD 200	275	6,000
Westburne Drlg Canada	34	dsl	380	IDECO HD25	380	4,500

NEW BRUNSWICK

Contractor	Rig No	Type Power	Total HP All Main Mud Pumps	Drawworks Make and Model	Total HP Available to Drawwks	Rated Depth with 4½" Pipe
UNDESIGNATED						
Regent Drlg	28	dsl	1400	BRWSTR N45	1400	14,000

NORTHWEST TERRITORIES

Contractor	Rig No	Type Power	Total HP All Main Mud Pumps	Drawworks Make and Model	Total HP Available to Drawwks	Rated Depth with 4½" Pipe
UNDESIGNATED						
Pan Arctic Drlg	B	dsl-scr	1000	NATL 80E	800	12,000
	A	dsl-scr	1600	OIME 1000E	1000	12,000
	C	dsl-scr	1600	OIME 1000E	1000	12,000
Parker Drlg	99-HH/6	dsl	1500	OIME Helihoist 1500	1500	17,000
Three Hundred Drlg	Ben	dsl	900	NATL 370M	900	9,500
ARCTIC ISLANDS						
Adeco Drlg & Engr	4	dsl	1380	OIME Helihoist 1500	2000	17,000
NORMAN WELLS						
Kenting Drlg	33-E	dsl-elec	1000	Superior 700E	700	9,000
POINTED MOUNTAIN						
Hi Tower Drlg	4	dsl-elec	3200	OILWELL E2000	2000	25,000

ONTARIO

Contractor	Rig No	Type Power	Total HP All Main Mud Pumps	Drawworks Make and Model	Total HP Available to Drawwks	Rated Depth with 4½" Pipe
LAMBTON						
Corunna Petr	3	dsl	950	Hooper GXXTA	700	5,500
	2	dsl	475	IDECO 525	636	8,500

QUEBEC

Contractor	Rig No	Type Power	Total HP All Main Mud Pumps	Drawworks Make and Model	Total HP Available to Drawwks	Rated Depth with 4½" Pipe
UNDESIGNATED						
Regent Drlg	6	dsl	1400	BRWSTR N45	1400	14,000

SASKATCHEWAN

Contractor	Rig No	Type Power	Total HP All Main Mud Pumps	Drawworks Make and Model	Total HP Available to Drawwks	Rated Depth with 4½" Pipe
UNDESIGNATED						
Bow island Drlg	9	dsl	278	Wlkr-Nr 2000	175	3,000
Sedco Drlg	85		300	Superior 300	318	4,500
	98	dsl	350	NATL T20	456	6,000
	96	dsl	300	Ideco H25	318	4,500
	90	dsl	350	M-CSCO U34D	456	5,500
	94	dsl	300	Crdwll Model L	210	4,000
Simmons Drlg	4	dsl	350	OILWELL 52T	360	6,800
	2	dsl	350	OILWELL 52T	350	6,800
	15	dsl	350	M-CSCO U34	360	600
	14	dsl	575	Troy M800	535	7,500
DODSLAND						
Westburne Drlg Canada	40	dsl	310	Failing 2500	175	3,000
ESTEVAN						
Atco Drlg Mustang Div	51	dsl	300	IDECO H25	360	6,000
	33	dsl	300	NATL T20	300	5,500
	34	dsl	300	NATL T20	350	5,500
KINDERSLEY						
Precision Drlg	2	dsl	380	IDECO H20AD	380	4,500
LUCELAND						
Precision Drlg	3	dsl	350	IDECO H30 Super 2FD	360	6,500
MARSDEN						
Westburne Drlg Canada	31	dsl	180	Failing 2500	275	3,000

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International Contract Rotary Land Drilling Rigs

Contractor	Rig No.	Type Power	Total HP All Main Mud Pumps	Drawworks Make and Model	Total HP Available to Drwwks	Rated Depth with 4½" Pipe
AFRICA						
ALGERIA						
SAIPEM	5891	dsl-elec	3200	NATL 110DE	1500	20,000
	5893	dsl-elec	3200	NATL 110DE	1500	20,000
	5894	dsl-elec	3200	NATL 110DE	1500	20,000
	5895	dsl-elec	3200	NATL 110DE	1500	20,000
	5892	dsl-elec	3200	NATL 110DE	1500	20,000
CONGO						
Sonpetrol	E-5	dsl	2200	EMSCO J1100	1300	14,000
	GC-1	dsl	1700	EMSCO GC500	800	10,000
EGYPT						
Challenger Ltd	18	dsl	900	CABOT/FRANKS 100	500	12,000
Forex Neptune and/or Affil	7	dsl	3200	NATL 110	1600	19,000
	22	dsl-elec	3200	GAR-DEN 2100	2300	25,400
	33	dsl-elec	3200	GAR-DEN 1100	1500	18,000
Geoprosco Intl	41	dsl	2200	IDECO H900	1100	10,000
Santa Fe Drlg	73	dsl	2000	NATL 110	1800	16,000
	92	dsl-elec	2800	NATL 1320UE	1400	20,000
	69	dsl-elec	2000	NATL 1320DE	3400	20,000
	94	dsl-elec	2250	NATL 110UE	2000	16,000
	97	dsl-elec	2800	OILWELL E2000	2000	20,000
	64	dsl	1800	NATL 110	1800	16,000
SAIPEM	5863	dsl-elec	3200	NATL 110DE	1500	20,000
GABON						
Forex Neptune and/or Affil	27	dsl	2600	IDECO Super 711	1200	18,000
LIBYA						
Arab Drlg & Workover	54	dsl	1400	NATL 80B	1800	12,000
	ADWOC3	dsl-elec	2600	EMSCO C111	1500	20,000
	118	dsl	1250	IDECO H525	700	9,000
	ADWOC-2	dsl-elec	2600	EMSCO C111	1500	20,000
	53	dsl	1250	IDECO H525	700	9,000
	37	dsl	1550	NATL 80B	1800	12,000
Challenger Ltd	19	dsl	1300	NATL 80B	1950	15,000
Deutsche Tiefbohr	T-26	dsl	2100	IDECO Super 711	1500	16,000
	T-16	dsl	2000	EMSCO A800	1000	12,000
AFRICA (Cont'd)						
Forex Neptune and/or Affil	44	dsl	3200	IDECO Super 711	1600	18,000
	41	dsl	1300	IDECO H525	640	9,000
	42	dsl	2000	NATL 80UE	1000	15,700
	43	dsl-elec	2000	NATL 80UE	1000	15,700
	35	dsl-elec	3200	GAR-DEN 1110E	1600	18,000
	13	dsl	2500	IDECO Super 711	1200	18,000
	2	dsl	2600	IDECO Super 711	1600	18,000
Oil Drlg & Expl	7	dsl	2000	IDECO Super 711	2000	17,000
	9	dsl	2000	IDECO Super 711	2000	17,000
Pool Intairdril	204	elec-scr	2000	IDECO ED1200	1000	12,000
	22	dsl	400	IDECO DIR550	400	6,500
	5	dsl	318	CABOT/FRANKS 1058/120	318	5,000
	205	dsl	2000	IDECO ED1200	1000	12,000
	206	elec-scr	2000	IDECO ED1200	1000	12,000
	3	dsl	318	CABOT/FRANKS 1287/120	476	5,000
	2	dsl	318	CABOT/FRANKS 1287/120	476	5,000
	10	dsl	318	CABOT/FRANKS 1058120	318	5,000
	34	dsl	600	CABOT/FRANKS 750	600	6,500
	32	dsl	600	CABOT/FRANKS 750	600	6,500
Santa Fe Drlg	ADWOC 1	dsl-elec	2600	EMSCO C111	1500	20,000
NIGERIA						
Forex Neptune and/or Affil	49	dsl-elec	3200	GAR-DEN 1100E	1500	18,000
	26	dsl	2600	IDECO Super 711	1200	18,000
	23	dsl-elec	3200	GAR-DEN 2100RE	3000	25,400
	24	dsl-elec	3200	GAR-DEN 2100RE	3000	25,400
	25	dsl-elec	3200	GAR-DEN 2100RE	3000	25,400
	9	dsl	2850	NATL 110	1600	19,000
	10	dsl	2600	NATL 110	1600	19,000
	11	dsl-elec	3200	NATL 110UE	1500	19,000
	4	dsl	550	IDECO H525	500	9,000
	5	dsl	2600	NATL 1105	1600	19,000
	1	dsl	2600	IDECO Super 711	1200	18,000
Sedco Inc	59	dsl	2800	OILWELL 860	2200	16,000
SAIPEM	5838	dsl	2500	IDECO H1700	1590	16,500
	5850	dsl	1135	IDECO H40	432	4,800
	5860	dsl	2500	IDECO H1700	1590	16,500
	5847	dsl	2130	IDECO H1700	1375	16,500

Contractor	Rig No	Type Power	Total HP All Main Mud Pumps	Drawworks Make and Model	Total HP Avail- able to Drwwks	Rated Depth with 4½" Pipe
AFRICA (Cont'd)						
SOMALIA						
Parker Drlg	143	dsl	2000	NATL 110	3300	20,000
SUDAN						
Parker Drlg	195-HH/42	dsl	3000	OIME TBA2000	2000	20,000
	105-HH/2	dsl	1200	OIME	1275	14,000
	119-HH/10	dsl	1950	OIME	1700	18,000
TUNISIA						
Forex Neptune and/or Affil	36	dsl-elec	3200	GAR-DEN	1600	18,000
SAIPEM	5846	dsl	2250	IDECO H1700	1740	16,500
	5842	dsl	2250	IDECO H1700	1740	16,500
ZAIRE						
Von Rautenkranz Hermann	ITAG-102	dsl	900	WILSON Mogul 42		10,000
ASIA						
BANGLADESH						
Parker Drlg	194-HH/41	dsl	2000	OIME TBA2000	2000	20,000
KUWAIT						
Energeers Ltd	1	dsl-elec	2000	M-CSCO D3	1000	13,000
OMAN						
Deutsche Tiefbohr	T-18	dsl	3200	NATL 55	1000	11,000
	T-17	dsl-elec	2700	NATL 1320UE	1800	20,000
PAKISTAN						
Challenger Ltd	61E	dsl	2800	GAR-DEN 1100E	1500	20,000
Deutsche Tiefbohr	T-10	dsl	2700	NATL 110H	1500	16,000
Parker Drlg	126-HH/14	dsl	1500	OIME TBA2000	1700	20,000
AUSTRALIA						
UNDESIGNATED						
Simmons Drlg	7	dsl	350	Hycalog HH-6000	350	6,800
AUSTRALIA/NEW ZEALAND						
AUSTRALIA						
Oil Drlg & Expl	5	dsl	1100	IDECO Jr Super 711	1100	13,000
	12	dsl	1500	IDECO H725	750	10,000
	8	dsl	350	IDECO H35	500	4,500
	15	dsl	2000	IDECO H1700	2000	17,000
	16	dsl	1600	IDECO 1200	1600	14,000
	6	dsl	1200	NATL 55	850	10,000
Pool Intairdril	9	dsl	420	CABOT/FRANKS Expl 1058-160	420	5,000
	18	dsl	110	Schramm T-64-HB	275	
	14	dsl	100	Schramm	200	1,000
	11	dsl	235	GAR-DEN 1000	235	1,000
	216	dsl		WILSON Super 38		3,400
	8	dsl	300	GAR-DEN 15W	300	1,500
	218	dsl		IDECO H44	750	3,400
	33	dsl	600	CABOT/FRANKS 750	600	6,500
Richter Drlg Pty	9	dsl	2000	NATL 80B	1000	12,000
	14	dsl-elec	2000	NATL 80UE	1000	12,000
	2	dsl	1600	NATL 55	900	10,000
	16	dsl	275	BRWSTR RR550	450	6,500
	4	dsl	600	NATL T32	300	6,000
	7	dsl	1600	NATL 610	750	10,000
	11	dsl		Cooper 750	375	10,000
	5	dsl		Cooper 750		10,000
NEW GUINEA						
Parker Drlg	140-HH/28	dsl	1500	OIME TBA2000	1700	20,000
NEW ZEALAND						
Oil Drlg & Expl	17	dsl-elec	2800	IDECO E2100	2800	21,000
CENTRAL AMERICA						
GUATEMALA						
Forex Neptune and/or Affil	39	dsl	1300	IDECO H525	500	9,000
	30	dsl-elec	3200	GAR-DEN	2000	21,700
Parker Drlg	185-HH/40	dsl	2000	OIME TBA2000	2000	20,000

Contractor	Rig No	Type Power	Total HP All Main Mud Pumps	Drawworks Make and Model	Total HP Avail- able to Drwwks	Rated Depth with 4½" Pipe
EUROPE						
DENMARK						
Deutsche Tiefbohr	T-14	dsl	2400	EMSCO A800	1000	14,000
FRANCE						
COSIFOR	E-350	dsl	1500	EMSCO 350	550	9,000
	G10E	dsl-elec	1600	NATL 610E	800	12,000
	N-110	dsl	2500	NATL 110	1500	18,000
Forex Neptune and/or Affil	31	dsl	3200	IDECO Super 711	1200	18,000
	20	dsl	2850	IDECO Super 711	1200	18,000
	29	dsl	450	NATL 55	700	10,800
	28	dsl	1200	IDECO H25	250	4,400
	18	dsl	900	IDECO H40	500	9,000
	19	dsl	1650	NATL 55	780	10,800
	14	dsl	1600	EMSCO GC500	500	10,800
	16	dsl-elec	2900	EMSCO 1100DE	1500	18,000
	17	dsl	2000	EMSCO A800	800	12,000
	3	dsl	1250	IDECO H525	700	9,000
ICELAND						
Orkustofnun State Drlg Contrs	NARFI	dsl	580	Failing 3000	290	6,000/3.5"
	DOFRI	dsl	1350	OILWELL 52T	320	7,300
	JOTUNN	dsl-elec	1500	GAR-DEN 700E	750	14,000
	GLAUMUR	dsl	290	Failing 2000	290	3,700/2.88"
	YMIR	dsl	180	Mayhew 1000	180	1,800/2.37"
ITALY						
Panterra Ltd	211	elec-scr	1300	IDECO 1700	2000	17,000
	212	elec-scr	1300	IDECO 1200	1000	12,500
SAIPEM	5858	dsl	1135	IDECO H40	432	4,800
	5855	dsl	1800	IDECO H1200	1740	12,600
	5806	dsl	440	Crdwll 02	590	8,100
	5899	dsl	1400	Crdwll 03	1050	10,400
	5836	dsl	2600	IDECO 1350S	1950	20,000
	5803	dsl	1400	IDECO H7/11	885	11,400
	5888	dsl-elec	3200	NATL 1625	3000	25,000
	5852	dsl-elec	880	IDECO E525	625	6,000
	5856	dsl	1700	IDECO H1200	1740	12,600
	5832	dsl-elec	3200	IDECO E2100	2000	20,000
	5840	dsl-elec	2600	IDECO H1700	1700	16,500
	5889	dsl	3200	IDECO E3000	3000	30,000
	5829	dsl-elec	2000	EMSCO D3	1000	10,000
	5872	dsl-elec	2600	NATL 1625	3000	25,000
	5898	dsl-elec	2600	IDECO HE1700	1700	16,500
	5864	dsl-elec	2900	EMSCO C3 Type 2 Pot	3000	25,000
NETHERLANDS						
Deutsche Tiefbohr	T32	dsl	420	IDECO H35KD	300	3,000
	T-36	dsl	1600	IDECO H1000	950	8,000
	T-40	dsl-elec	2600	NATL 80B	1000	15,000
	T-19	dsl	2600	NATL 80BE	1000	14,000
	T-27	dsl-elec	3200	NATL 130	1625	20,000
Kenting Drlg Serv	21	dsl-elec	1000	NATL 80UE	1000	14,000/5"
PORTUGAL						
Boldon Drlg	80	dsl-elec	800	NATL 80UE	1000	14,000
	81	dsl-elec	800	NATL 80UE	1000	14,000
SPAIN						
Compania Gen De Sondeos SA	800	dsl	2400	GAR-DEN	1470	14,800
	110	dsl	2700	NATL T2029	1700	19,700
	G450	dsl	1050	EMSCO G450	450	10,000
Compania General De Sondeos SA	1320	dsl-elec	2600	NATL 1320UE	2500	20,000
Sonpetrol	N-9	elec	2600	NATL 110	2750	16,000
	GD-2	dsl	1100	GAR-DEN 500	600	10,000
	N-8	dsl	2000	NATL 80UE	1000	14,000
	N-7	dsl	3200	NATL 1625	3000	25,000
SWITZERLAND						
Deutsche Tiefbohr	T-7	dsl	1300	NATL 80B	1000	11,000
Kenting Drlg Serv	34	dsl-elec	940	NATL 610UE	750	11,500
UNITED KINGDOM						
Boldon Drlg	21	dsl	370	NATL T20	290	4,500
	61	dsl-elec	600	OILWELL 660E	700	10,000
	23	dsl	350	NATL T20	280	4,000
	22	dsl	590	NATL T20	335	5,500
Houlder Marine Drlg	2	dsl-elec	1600	Superior 700E	1000	9,000
Kenting Drlg Serv	17	dsl	350	Stratmaster 90	350	5,000/3.5"
	36	dsl-elec	940	Superior 700UE	700	10,000
	26	dsl	350	Superior 400	350	7,000/4"
	31	dsl-elec	1000	NATL 80UE	1000	14,000/5"
	19	dsl	350	GAR-DEN 3000	230	4,500/3.5"
	12	dsl	350	BRWSTR N45	350	8,000/4"

EUROPE (Cont'd)

Contractor	Rig No	Type Power	Total HP All Main Mud Pumps	Drawworks Make and Model	Total HP Available to Drwwks	Rated Depth with 4½" Pipe
WEST GERMANY						
Deutsche Tiefbohr	T-47	dsl-elec	3900	EMSCO C3	3000	30,000
	T-81	dsl	375	Cooper LTO350	200	4,000
	T-82	dsl	375	Cooper LTO350	200	4,000
	T45	dsl-elec	2600	EMSCO C2	2000	20,000
	T-29	dsl-elec	2600	NATL 1320ME	2000	20,000
	T-30	dsl-elec	1000	IDECO E725D	725	6,000
	T-1	dsl	335	IDECO H1000	910	8,000
	T-8	dsl	335	IDECO H1000	910	8,000
	T-9	dsl	335	IDECO H1000	910	8,000
	T-4	dsl	500	IDECO H30	455	6,000
	T-5	dsl	335	IDECO H525D	910	6,000
	T-3	dsl	420	IDECO H44CD	460	5,000
Preussag Aktiengesellschaft	1320UE	dsl	3200	NATL 3120UE	2000	25,000
	2	dsl	1500	CABOT/FRANKS Model 2346	840	10,000
	1	dsl	1100	CABOT/FRANKS Model 2346	840	10,000
	GH35	dsl	2000	DeMag GH35	1500	16,500
	900/3	dsl	1450	Ingersoll Mode 2346	900	10,000
	ZA292	dsl	500	Salzgitter	180	3,000
	GH-25	dsl	2000	Wirth GH25	1500	14,000
SAIPEM	5870	dsl-elec	3200	NATL 1625	3000	25,000
Von Rautenkranz Hermann	ITAG-109	dsl	600	WILSON M75		70,000
	ITAG-104	dsl	1450	WILSON Mogul		8,000
	ITAG-23	dsl-elec	3000	OILWELL 2000E		25,000
	ITAG-108	dsl	1600	WILSON M75		10,000
	ITAG 22	dsl	3000	NATL 110M		20,000

MIDDLE EAST

Contractor	Rig No	Type Power	Total HP All Main Mud Pumps	Drawworks Make and Model	Total HP Available to Drwwks	Rated Depth with 4½" Pipe
ABU DHABI						
Forex Neptune and/or Affil	34	dsl-elec	3200	GAR-DEN 1100	1500	18,000
	40	dsl-elec	2000	NATL 80UE	1000	15,700
	32	dsl-elec	3200	GAR-DEN 1100E	1500	18,000
BAHRAIN						
Santa Fe Drlg	142	dsl	2600	NATL 11OUE	1500	18,000
IRAN						
SAIPEM	5837	dsl	2600	IDECO 1350S	1950	20,000
IRAQ						
SAIPEM	5848	dsl	2600	IDECO H1700	1740	16,500
	5849	dsl	2600	IDECO H1700	2100	16,500
	5843	dsl-elec	2800	OILWELL E2000	2000	20,000
KUWAIT						
Kuwait Drlg	KDC-5	dsl-elec	1700	GAR-DEN 800E	800	12,000
	KDC-9	dsl-elec		OILWELL E2000	2000	25,000
	KDC-11	dsl-elec	5100	OILWELL E-3000	3000	30,000
	KDC-10	dsl-elec	5100	OILWELL E3000	3000	30,000
	KDC-6	dsl-elec	5100	OILWELL E3000	3000	30,000
	KDC-8	dsl-elec		OILWELL E2000	2000	25,000
	KDC-7	dsl-elec	1700	GAR-DEN 800E	800	12,000
Parker Drlg	189	dsl-elec	3200	OIME 3000E	3000	30,000
Santa Fe Drlg	KDC 9	dsl-elec	2800	OILWELL E2000	2000	20,000
	KDC 8	dsl-elec	2800	OIWELL E2000	2000	20,000
OMAN						
Deutsche Tiefbohr	T-33	dsl	1600	NATL 55	1000	11,000
	T-34	dsl	1600	IDECO H1000	950	8,000
Forex Neptune and/or Affil	58	dsl	2000	NATL 80B	1000	15,700
	57	dsl	2000	OILWELL 760	1000	15,000
	15	dsl-elec	3200	IDECO Super 711	1200	18,000
	12	dsl	1800	IDECO Junior 1200	1400	11,500
Pool Intairdril	6	dsl	600	CABOT/FRANKS 750	650	7,500
QATAR						
Deutsche Tiefbohr	T-6	dsl	500	IDECO H1000	910	8,000
Santa Fe Drlg	93	dsl-elec	1700	NATL 80UE	700	12,000
	89	dsl-elec	2000	NATL 110UE	1800	16,000
SAUDI ARABIA						
Loffland Bros	127	dsl-elec	3200	M-CSCO U1220EBD	2000	25,000
	128	dsl-elec	3200	M-CSCO U1220EDB	2000	25,000
	126	dsl-elec	3200	M-CSCO U1220EBD	2000	25,000
Pool Arabia	128	dsl	230	CABOT/FRANKS Expl III	450	6,500
	194	dsl	750	Ingersoll 2042/160	700	8,500
	15	dsl	420	IDECO DIR550	420	6,500
	40	dsl	600	CABOT/FRANKS 700	600	6,500
	29	dsl	420	CABOT/FRANKS Expl 1058	420	6,000
	23	dsl	300	IDECO H40	450	8,000

MIDDLE EAST (Cont'd)

Contractor	Rig No	Type Power	Total HP All Main Mud Pumps	Drawworks Make and Model	Total HP Available to Drwwks	Rated Depth with 4½" Pipe
SAUDI ARABIA (Cont'd)						
Pool Arabia	203		1400	OILWELL	1000	12,000
	201	dsl	1400	OILWELL	1000	3,000
	202	dsl	1400	OILWELL	1000	12,000
	190	dsl	550	CABOT/FRANKS	700	7,500
	191	dsl	550	CABOT/FRANKS	700	7,500
	192	dsl	500	Ingersoll 2042/160	700	8,500
	195	dsl	750	Ingersoll 2042/160	700	8,500
	138	dsl	450	CABOT/FRANKS	450	6,500
	193	dsl	500	Ingersoll 2042/160	700	8,500
Santa Fe Drlg	109	dsl-elec	2000	NATL 110UE	1800	16,000
	90	dsl-elec	2000	NATL 1320DE	2000	20,000
	101	dsl-elec	2600	NATL 110UE	1500	16,000
	102	dsl-elec	2400	NATL 110UE	1500	16,000
	70	dsl-elec	2000	NATL 1320DE	3400	20,000
	67	dsl-elec	2400	NATL 1320DE	3400	20,000
	104	dsl-elec	3400	NATL 1100UE	1500	16,000
SYRIA						
Santa Fe Drlg	75	dsl	2000	NATL 1320M	1800	20,000
UNITED ARAB EMIRATES						
Forex Neptune and/or Affil	56	dsl	2000	NATL 80B	1000	15,700
	21	dsl-elec	3200	GAR-DEN 2100E	2300	25,400
Geoprosco Intl	36	dsl	725	IDECO H900	725	10,000
	43	dsl-elec	700	IDECO ED-900	1000	10,000
	42	dsl-elec	725	IDECO ED-900	1000	10,000
Pool Intairdril	214	elec-scr	900	IDECO 900	1000	10,500
	213	elec-scr	900	IDECO 900	1000	10,500
	215	elec-scr	900	IDECO 900	1000	10,500
Santa Fe Drlg	139	dsl	3400	OILWELL E2000	2000	25,000
	121	dsl-elec	3400	OILWELL 2000E	3000	25,000
	131					
Sedco Inc	97	dsl	2700	OILWELL 860	2200	16,000
	98	dsl-elec	2600	NATL 1320UE	2000	20,000
	96	dsl	3400	OILWELL E2000	2000	20,000
	95	dsl-elec	3400	NATL 1320UE	2000	20,000
Sonat Offshore Drlg	37	dsl-elec	2000	IDECO ED1200	1200	12,000
	14	dsl		EMSCO C2 Type II		20,000
SAIPEM	5887	dsl-elec	3200	NATL 1625	3000	25,000
	5827	dsl-elec	3200	IDECO E2100	2000	20,000
	5828	dsl-elec	3200	IDECO E2100	2000	20,000

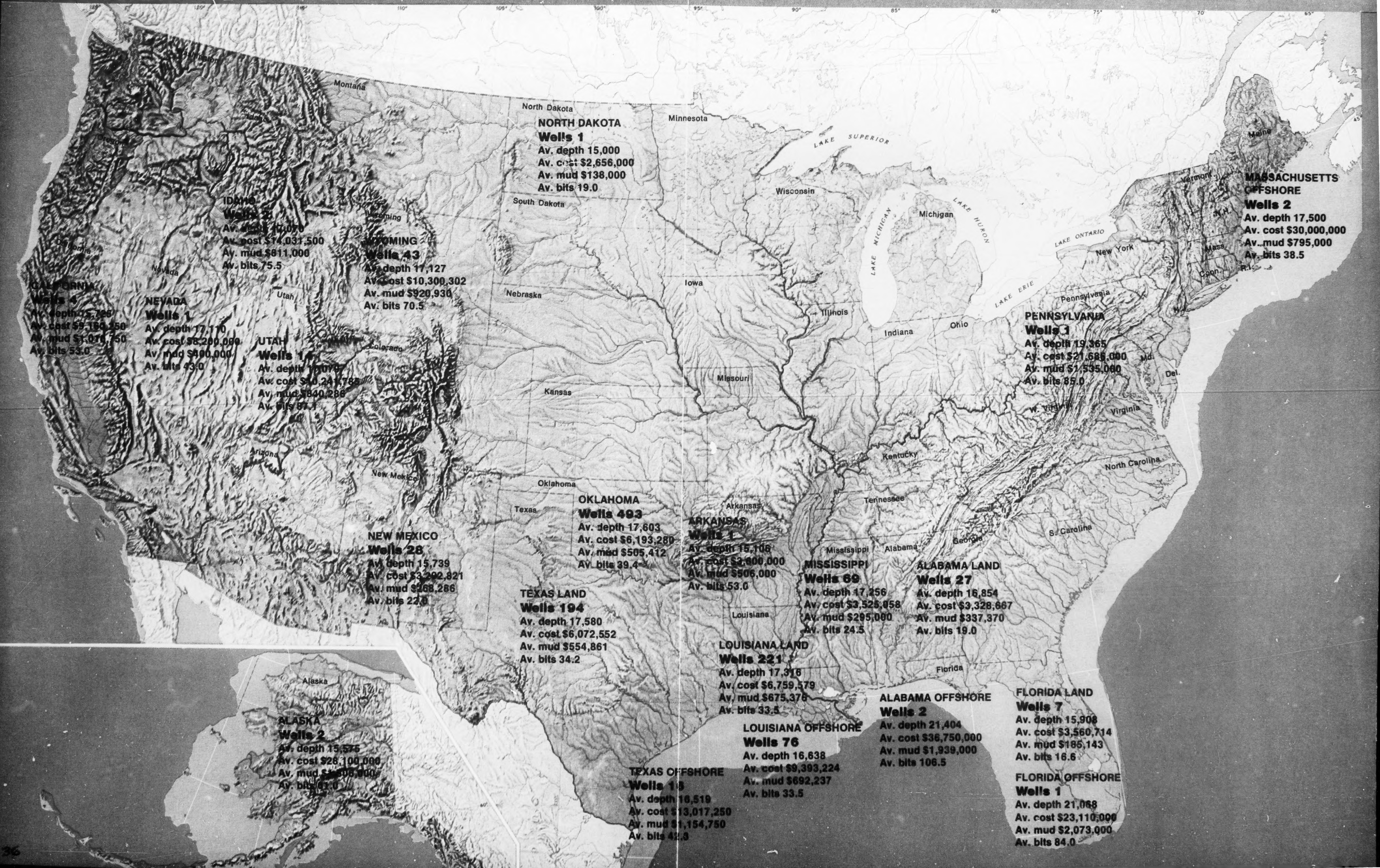
SOUTH AMERICA

Contractor	Rig No	Type Power	Total HP All Main Mud Pumps	Drawworks Make and Model	Total HP Available to Drwwks	Rated Depth with 4½" Pipe
ARGENTINA						
Compania Naviera Perez Companc	1	dsl	1400	Crdwll J450	700	6,900
	46	dsl	1500	GAR-DEN 500M	700	10,000
	42	dsl	1000	GAR-DEN 700	1700	10,000
	37	dsl	1400	Crdwll KB-210	350	5,900
	29	dsl	1600	GAR-DEN 700	700	10,000
	5	dsl	1400	Crdwll KM250	350	5,900
	6	dsl	1400	Crdwll KM250	350	5,900
	4	dsl	1400	Crdwll J450	700	6,900
	3	dsl	1400	Crdwll J450	700	6,900
	2	dsl	1400	Crdwll J450	700	6,900
Rio Colorado SA	304	dsl		Wgnr-Mrhse 1538B		11,000
	E-103	dsl	1250	M-CSCO U36A	1000	10,000
	E-102	dsl	1250	M-CSCO U36A	1000	10,000
	308	dsl		Crdwll K200		10,000
	311	dsl		WILSON Super 38		11,000
	312	dsl		Crdwll KB150		9,000
	E-310	dsl	230	Crdwll KB200-C	380	10,000
	E-307	dsl	180	IDECO H-25	380	10,000
	E-309	dsl	230	IDECO KB210A	280	10,000
	E-302	dsl	180	WM-1538B	380	11,000
	321	dsl		IDECO M20D		8,500
	322	dsl		IDECO M20D		8,500
	324	dsl		IDECO M20D		8,500
	325	dsl		IDECO H25		9,500
	326	dsl		Crdwll KB210A		10,000
	327	dsl		IDECO H20		8,500
	E-130	dsl	1320	IDECO H40	450	8,000
	E-301	dsl	230	Crdwll KB500	380	12,000
	E-109	dsl	1250	NATL N75	1500	11,000
	E-318	dsl	550	IDECO H30	230	11,000
	E-317	dsl	550	Crdwll KB200C	370	10,000
	E-108	dsl	1250	NATL	800	10,000
	E-125	dsl	880	IDECO H37	500	6,500
	E-107	dsl	1800	NATL 100N	1500	16,000
	E-323	dsl	550	IDECO H30	230	11,000
	E-110	dsl	1000	IDECO H40	500	8,000
	E-320	dsl	550	IDECO H30	230	11,000
	112	dsl		IDECO H40		6,500
	E-111	dsl	1500	GAR-DEN 800DW	900	11,000
	303	dsl		Wgnr-Mrhse 1538B		11,000
	E-101	dsl	1250	M-CSCO U36A	700	10,000
	146	dsl				15,000
	306	dsl		Crdwll K210A		10,000
	305	dsl		WILSON Super 38		11,000
	E-319	dsl	550	IDECO H30	230	11,000
	E-137	dsl	1900	IDECO H1200	2500	15,000
	E-105	dsl	1000	EMSCO GC350	800	9,000

Contractor	Rig No	Type Power	Total HP All Main Mud Pumps	Drawworks Make and Model	Total HP Available to Drwwks	Rated Depth with 4½" Pipe
SOUTH AMERICA (Cont'd)						
ARGENTINA (Cont'd)						
Rio Colorado SA	E-127	elec	2860	GAR-DEN 1500E	2000	20,000
	E-128	dsl-elec	1140	IDECO E525	1000	10,000
	E-129	dsl	1600	NATL 75	1000	10,000
	E-134	dsl-elec	2600	NATL 1625DE	3000	25,000
	E-126	dsl	2600	NATL 1320UE	2000	20,000
	E-113	dsl	1600	GAR-DEN 800DW	1200	12,000
	E-112	dsl	1000	IDECO H40	500	6,500
	E-132	dsl	1320	IDECO H40	550	8,000
RBI Drlg	31	dsl	2700	NATL 110M	3075	18,000
	30	dsl	2700	NATL 110M	3075	18,000
BOLIVIA						
Drilcon	6	dsl	2145	GAR-DEN 1100M	2145	16,000
	7	dsl	1290	EMSCO GB800	1290	12,000
Helmerich & Payne Rasco	11	dsl-elec	1600	HS1500	1500	18,000
	9	dsl-elec	1600	HS1500	1500	18,000
Rio Colorado SA	E-104	dsl	1000	IDECO H525	800	10,000
BRAZIL						
Compania Naviera Perez Companc	36	dsl	1600	GAR-DEN 800	1050	12,000
	45	dsl-elec	2600	IDECO E-1700	1700	15,200
Parker Drlg	134-HH/22	dsl	1500	OIME TBA2000	1700	20,000
	132-HH/20	dsl	1500	OIME TBA2000	1700	20,000
	151-HH/34	dsl	1500	OIME TBA2000	1700	20,000
	145-HH/31	dsl	1500	OIME TBA2000	1700	20,000
Rio Colorado SA	E-123	elec	2600	NATL 1320E	2000	20,000
	E-120	dsl	2600	BRWSTR N95A	2250	14,000
	E-122	elec	2600	BRWSTR N95A	2000	16,000
	E-119	dsl	1650	EMSCO A800	1600	12,000
	E-121	elec	2600	BRWSTR N95A	2000	16,000
	E-124	elec	2600	NATL 1320E	2000	20,000
COLOMBIA						
Helmerich & Payne (Colombia)	10	dsl-elec	1600	HS1500	1500	18,000
	7	dsl-elec	2000	HS1500	1500	18,000
Parker Drlg	158	dsl	1200	NATL 80B	1700	15,000
	104	dsl	1400	NATL 50A	1275	10,000
	110HH/9	dsl	1500	OIME	1700	17,000
	219	dsl	3200	OIME 2000	3200	25,000
	197-HH/43	dsl	2000	OIME TBA2000	2000	20,000
	80	dsl	2900	NATL 130	2900	25,000
	216	dsl	3200	OIME 2000	3200	25,000
	209	dsl	750	NATL 50	750	10,000
Pool Americas	208	dsl	2000	OIME	1000	12,000
	209	dsl	2000	OIME	1000	12,000
Rio Colurado Drlg	135	dsl	1300	IDECO H40SP	500	9,500
Rio Colorado SA	144	dsl		BRWSTR N85		14,000
	135	dsl	1100	IDECO H40	600	8,000
ECUADOR						
Helmerich & Payne Del Ecuador	12	dsl-elec	1600	HS1500	1500	18,000
	18	dsl	500	Cooper LTO550	600	6,000
Parker Drlg	159	dsl	2200	OILWELL 76	1560	15,000
Pool Intairdril	217	dsl	400	IDECO H37	450	
	210	dsl	400	WILSON DD42428	450	3,000
	207	dsl	400	WILSON Mogul 42B	400	
	126	dsl	230	WILSON Mogu. 42	450	6,500
GUATEMALA						
Helmerich & Payne (Guatemala)	16	dsl-elec	2600	HS1500	1500	18,000
	45	dsl-el-scr	3000	NATL 1320UE	2000	25,000
PERU						
Belco Petr	7	dsl	850	EMSCO A1100	1600	14,000
	8	dsl	850	EMSCO DH4610	1000	10,000
	3	dsl	1000	NATL 55	700	9,000
	4	dsl	1000	NATL 80B	1000	12,000
	6	dsl	1000	BRWSTR DH4610	1000	12,000
	2	dsl	1000	BRWSTR H4210	700	6,000
Blocker Intl	21	dsl	550	IDECO H37	456	7,000
	23	dsl	550	IDECO H37	456	7,000
	31					15,000
	34					15,000
	24	dsl	550	IDECO H37	456	7,000
	22	dsl	550	IDECO H37	456	7,000
Parker Drlg	206	dsl		OIME TBA2000	2000	20,000
	155	dsl	1500	OIME TBA2000	1700	20,000
	109-HH/7	dsl	1500	OIME	1700	17,000
	108-HH/5	dsl	1500	OIME	1700	17,000
	127-HH/15	dsl	1500	OIME TBA2000	1700	20,000
	131-HH/*9	dsl	1500	OIME TBA2000	1700	20,000
	154-HH/35	dsl	1500	OIME TBA2000	1700	20,000
	107-HH/4	dsl	1200	OIME	1700	15,000
	207	dsl	2000	OIME TBA2000	2000	20,000
Rio Colorado SA	E-118	dsl	600	Ingersoll RT5	200	3,000
	E-117	dsl	900	Crdwll KT250	500	6,000
	E-116	dsl	900	Crdwll KT250	500	6,000
	E-115	dsl	900	Crdwll KT250	500	6,000
	313	dsl		Crdwll KB150		9,000
	315	dsl		Crdwll KB150		9,000
	316	dsl		Crdwll KB150		9,000
SOUTH AMERICA (Cont'd)						
PERU (Cont'd)						
Rio Colorado SA	314	dsl		Crdwll KB150		9,000
	E-106	dsl	1000	EMSCO GC350T	1000	9,000
	E-114	dsl	900	Crdwll KT250	500	6,000
VENEZUELA						
Helmerich & Payne CA	67	dsl	1500	NATL 110	1500	18,000
	3	dsl	600	IDECO H37	600	6,000
	20	dsl	600	Cooper LTO550	600	6,000
	28	dsl	1500	NATL 110	1500	18,000
	30	dsl	1200	IDECO H525	1200	10,000
	31	dsl	1200	IDECO H525	1000	10,000
	21	dsl	600	Cooper LTO550	600	6,000
	19	dsl	600	Cooper LTO550	600	6,000
	17	dsl	600	Cooper LTO550	600	6,000
	14	dsl	600	IDECO H37	400	6,000
	6	dsl	300	IDECO H44	400	5,000
Loffland Bros	94	dsl-elec	2000	M-CSCO U20E	1900	16,000
	68	dsl-elec	3200	M-CSCO U1220EB	3300	28,000
	61	dsl	500	IDECO H525	566	6,500
	14	dsl	700	M-CSCO U36A	785	9,000
	54	dsl-elec	2900	M-CSCO U1220EB	3300	28,000
	24	dsl-elec	2000	NATL 100E	2000	16,000
	41	dsl	2000	M-CSCO U914C	2000	20,000
Santa Fe Drlg	110	dsl-elec	2000	NATL 1320UE	2000	20,000
	115	dsl-elec	2000	NATL 1320DE	3400	20,000
	8	dsl	2200	NATL 130	1800	20,000
	2	dsl	1700	NATL 130	1800	20,000
	129	dsl	1700	GAR-DEN 500M	650	9,000
	21	dsl	1200	U914B	1800	20,000
	24	dsl	350	IDECO H35	350	5,000
	125	dsl	800	Hooper GXTA	450	6,000
	22	dsl	350	IDECO H35	350	5,000
	15	dsl	800	IDECO 525	600	9,000
	20	dsl	800	IDECO H40D	350	7,000
	16	dsl	600	NATL T32	250	5,000
	9	dsl	1850	NATL 130	1800	20,000
	119	dsl-elec	2800	OILWELL E2000	2000	20,000
SOUTHEAST ASIA						
BRUNEI						
Deutsche Tiefbohr	T-41	dsl	1800	WILSON 780	780	8,000
	T-31	dsl	1000	WILSON 780	910	8,000
INDONESIA						
Hi Tower Drlg	9	dsl	780	NATL 50A	880	8,500
Houlder Marine Drlg	1	dsl-elec	1600	NATL 80UE	1000	12,000
Loffland Bros	56	dsl	900	M-CSCO U36A	900	10,000
	300	dsl	600	M-CSCO U34	500	4,000
	139	dsl	1400	M-CSCO U36	900	10,000
Parker Drlg	125-HH/13	dsl	1200	OIME	1700	18,000
	130-HH/18	dsl	1500	OIME TBA2000	1700	20,000
	106-HH/3	dsl	1600	OIME	1275	14,000
	188-HH/38		2000	OIME TBA2400	2000	24,000
	115-HH/8	dsl	1200	OIME	1700	18,000
	190-HH/39	dsl	1500	OIME TBA2000	1700	20,000
PT Malhabor Indonesia	MBI 1	dsl	600	NATL 610	750	12,000
PT Meta Epsi Drlg	3	dsl-elec	1050	HD1500E	1500	15,000
	2	dsl-elec	1050	HD1500E	1500	15,000
	1	dsl	1600	NATL 610	850	12,000
PHILIPPINES						
Richter Drlg Pty	8	dsl	1400	NATL 110M	1100	15,000
	6	dsl	1350	NATL 100	1000	14,000
SINGAPORE						
Forex Neptune and/or Affil	45	dsl-elec	1960	WILSON EH120	1100	16,900
Parker Drlg	146-HH/32	dsl	1500	OIME TBA2000	1700	20,000
	156-HH/36	dsl	1500	OIME TBA2000	1700	25,000
	160	dsl	1500	OIME TBA2000	1700	20,000
SUMATRA						
Bawden Drlg Intl	6	dsl	1000	NATL T45	550	7,500
	51	dsl	1200	Superior 700	700	10,000
	29	dsl-elec	1400	NATL 80E	1000	12,000
	3	elec-scr	3200	NATL 1320UE	2000	22,000
	28	dsl	925	EMSCO GB350	350	7,200
Parker Drlg	153/187	dsl-elec	3200	OIME 3000E	2000	24,000
	168	dsl-elec	3200	EMSCO C2	2000	24,000
THAILAND						
Deutsche Tiefbohr	T-46	dsl-elec	2600	EMSCO C2	2000	20,000
Parker Drlg	200-HH/44	dsl	2000	OIME TBA2000	2000	20,000
Sedco Inc	91	dsl-elec	3400	NATL 110UE	2000	16,000
WEST INDIES						
JAMAICA						
Parker Drlg	144-HH/30	dsl	1500	OIME TBA2000	1700	20,000

C3300-2

1982 U.S. deep drilling 1,205 deep wells


NORTH DAKOTA
Wells 1
Av. depth 15,000
Av. cost $2,656,000
Av. mud $138,000
Av. bits 19.0
IDAHO
Wells 2
Av. depth 17,070
Av. cost $14,031,500
Av. mud $811,000
Av. bits 75.5
WYOMING
Wells 43
Av. depth 17,127
Av. cost $10,300,302
Av. mud $920,930
Av. bits 70.5
CALIFORNIA
Wells 4
Av. depth 15,725
Av. cost $9,160,250
Av. mud $1,010,750
Av. bits 53.0
NEVADA
Wells 1
Av. depth 17,110
Av. cost $8,200,000
Av. mud $400,000
Av. bits 43.0
UTAH
Wells 14
Av. depth 1[illegible],070
Av. cost $10,241,785
Av. mud $840,286
Av. bits 87.1
MASSACHUSETTS OFFSHORE
Wells 2
Av. depth 17,500
Av. cost $30,000,000
Av. mud $795,000
Av. bits 38.5
PENNSYLVANIA
Wells 1
Av. depth 19,365
Av. cost $21,686,000
Av. mud $1,535,000
Av. bits 85.0
OKLAHOMA
Wells 493
Av. depth 17,603
Av. cost $6,193,280
Av. mud $505,412
Av. bits 39.4
NEW MEXICO
Wells 28
Av. depth 15,739
Av. cost $3,292,821
Av. mud $268,286
Av. bits 22.0
ARKANSAS
Wells 1
Av. depth 15,106
Av. cost $3,600,000
Av. mud $506,000
Av. bits 53.0
MISSISSIPPI
Wells 69
Av. depth 17,256
Av. cost $3,525,058
Av. mud $295,000
Av. bits 24.5
ALABAMA LAND
Wells 27
Av. depth 16,854
Av. cost $3,328,667
Av. mud $337,370
Av. bits 19.0
TEXAS LAND
Wells 194
Av. depth 17,580
Av. cost $6,072,552
Av. mud $554,861
Av. bits 34.2
LOUISIANA LAND
Wells 221
Av. depth 17,316
Av. cost $6,759,579
Av. mud $675,376
Av. bits 33.5
ALABAMA OFFSHORE
Wells 2
Av. depth 21,404
Av. cost $36,750,000
Av. mud $1,939,000
Av. bits 106.5
FLORIDA LAND
Wells 7
Av. depth 15,908
Av. cost $3,560,714
Av. mud $185,143
Av. bits 16.6
LOUISIANA OFFSHORE
Wells 76
Av. depth 16,638
Av. cost $9,393,224
Av. mud $692,237
Av. bits 33.5
ALASKA
Wells 2
Av. depth 15,575
Av. cost $28,100,000
Av. mud [illegible]
Av. bits 61.0
TEXAS OFFSHORE
Wells 16
Av. depth 16,519
Av. cost $13,017,250
Av. mud $1,154,750
Av. bits 42.8
FLORIDA OFFSHORE
Wells 1
Av. depth 21,068
Av. cost $23,110,000
Av. mud $2,073,000
Av. bits 84.0
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Minnesota
South Dakota
Wyoming
Oregon
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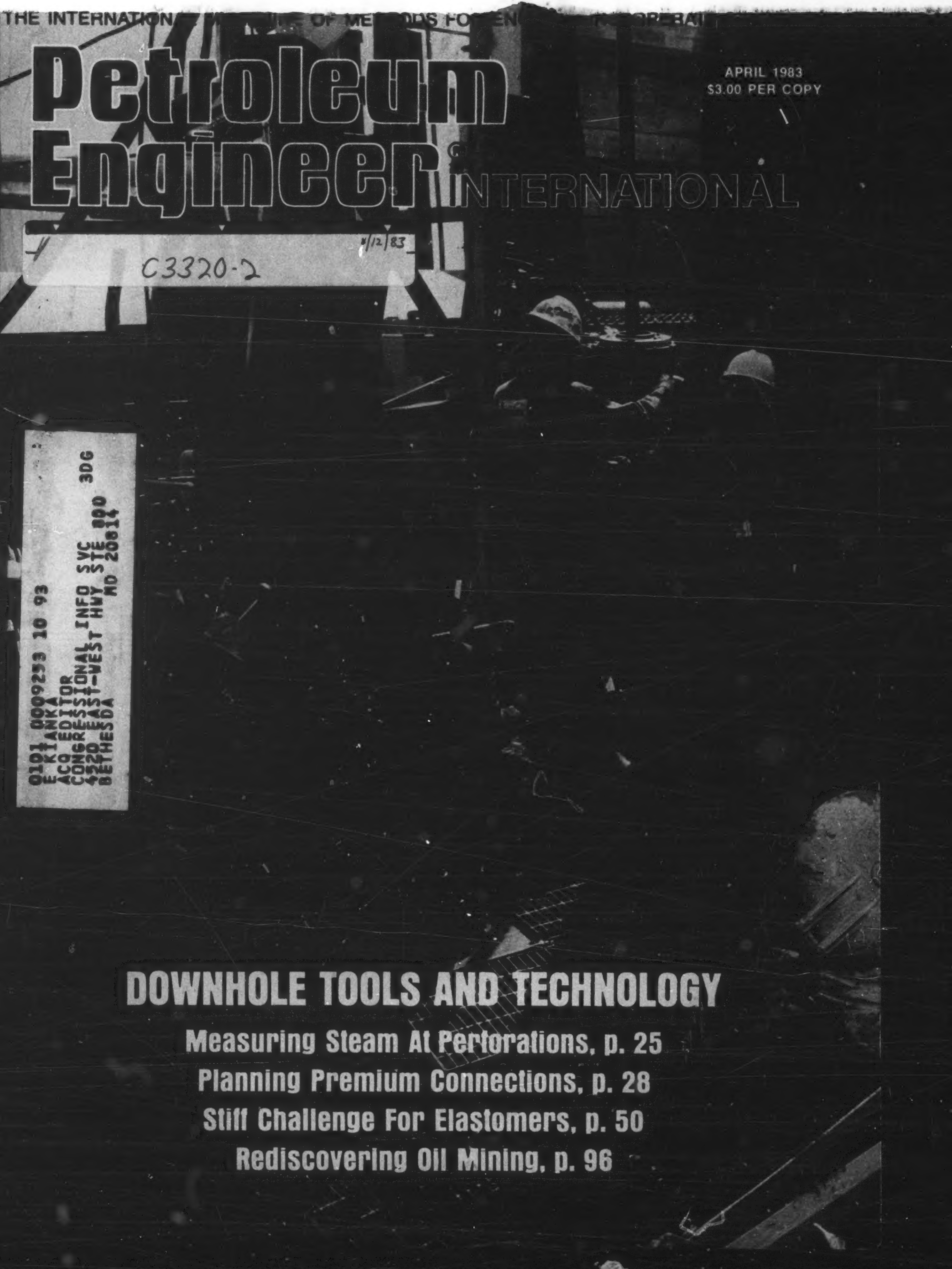

DOWNHOLE TOOLS AND TECHNOLOGY

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operating people

APRIL 1983 NUMBER 5 VOLUME 55

ABOUT THE COVER: Using a concentric tubing rig, an offshore Louisiana well is being recompleted for Union Oil Co. of California. (Photo courtesy of Pool Offshore Co.)

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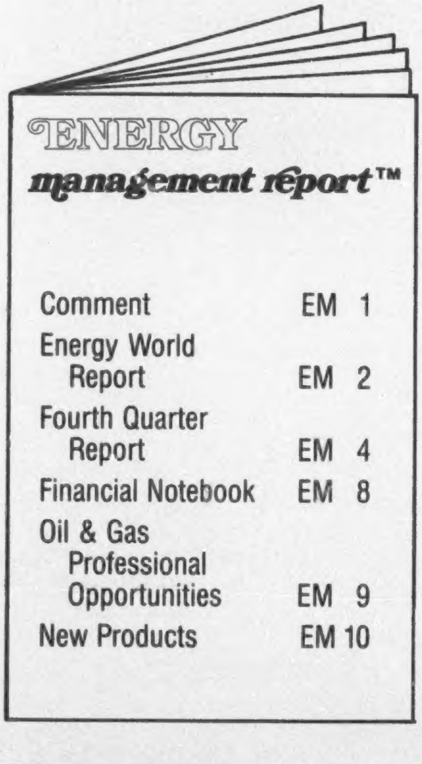

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Rotary Rig Count Drops 54% Below Record High

The decline in rig activity from the all-time high of 4,467 on Jan. 4, 1982 has passed the 50% mark, and stood at 54.2% at the beginning of last month.

On a state-by-state basis, Texas is the leader in the number of active rigs lost since the national high-water mark, with 721. That is a 50% decline. Oklahoma is second, with a loss of 566 rigs, and that represents a 66% drop in rotary rig activity. Louisiana is third, with a decline of 179 rigs, but that represents a drop of only 37% – well below the national average.

Other major drilling states doing better than average include California (off 45%) and Kansas (which is even with Texas at 50%).

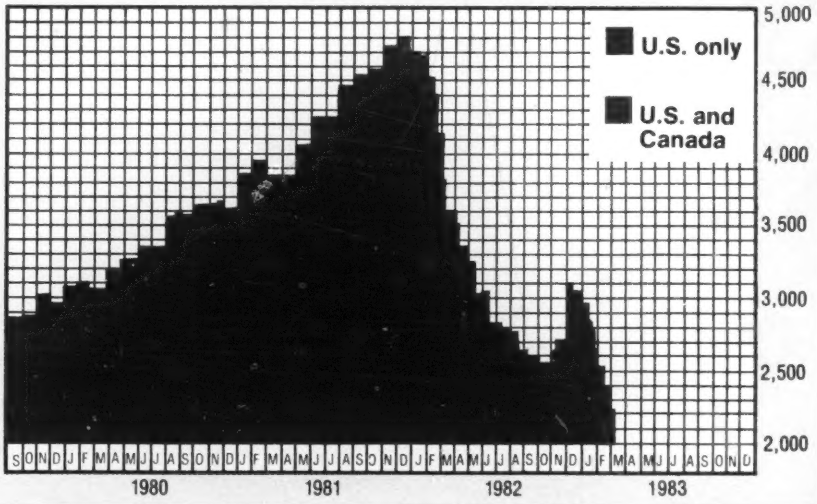
Ohio, with a drop of 73 rigs, registered a 78% decline, which was followed closely by North Dakota (down 76%). Wyoming's 149-rig decline represented a 66% drop.

If there is any award to be passed out, it probably should go to Alabama, which had 22 active rigs at the high-water mark and 22 on March 7, 1983.

Rotary Rigs Actually Making Hole In United States & Canada

As Reported To International Association Of Drilling Contractors By Hughes Tool Co.

	Feb. 14, 1983	Feb. 21, 1983	Feb. 28, 1983	March 7, 1983
Alabama				
Land	14	16	17	18
Inland Waters	4	4	4	4
Alaska				
Land	13	14	14	14
Offshore	1	1	2	2
Total	14	15	16	16
Arkansas	29	25	25	26
Arizona	0	1	1	1
California				
Land	68	74	73	73
Offshore	26	23	21	21
Total	94	97	94	94
Colorado	43	40	39	40
Florida	3	3	3	3
Hawaii	1	1	1	1
Idaho	1	1	1	1
Illinois	32	30	27	36
Indiana	5	4	5	4
Kansas	119	115	114	114
Kentucky	6	9	9	10
North Lousiana	37	28	27	24
South Louisiana				
Inland Waters	47	46	47	45
Land	91	95	91	92
Offshore	132	139	143	141
Total	307	308	308	302
Massachusetts				
Offshore	1	1	1	1
Michigan	27	24	28	23
Mississippi	30	29	33	32
Montana	25	22	22	21
Nebraska	11	10	8	9
Nevada	1	1	1	1
New Mexico	61	63	61	60
New York	13	14	6	5
North Dakota	40	42	31	28
Ohio	34	28	21	21
Oklahoma	297	285	274	283
Oregon	0	0	1	1
Pennsylvania	28	21	18	16
Tennessee	1	1	0	0
Texas				
Offshore	53	54	50	47
Inland Waters	7	9	7	8
Dist. 1-S. Central Tex.	20	22	22	21
Dist. 2-Middle Tex. Coast	36	36	31	29
Dist. 3-Upper Tex. Coast	104	92	95	92
Dist. 4-Lower Tex. Coast	103	94	75	67
Dist. 5-N.E. Tex.	25	21	19	20
Dist. 6-Far N.E. Tex.	92	88	85	81
Dist. 7B-N. Central Tex.	55	57	54	55
Dist. 7C-W. Central Tex.	69	68	58	51
Dist. 8-Far West Tex.	97	95	89	92
Dist. 8A-West Tex.	54	60	63	62
Dist. 9-North Tex.	64	60	65	66
Dist. 10-Tex. Panhandle	44	37	42	40
Total	823	793	755	731
Utah	38	37	36	33
Virginia	3	2	3	3
Washington	1	1	1	1
West Virginia	37	32	29	29
Wyoming	80	72	71	75
Total U.S.	2,223	2,147	2,064	2,043
Canada	217	242	240	243
Canada-Offshore	7	6	5	5
U.S. and Canada	2,447	2,395	2,309	2,291



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How Technology And Price Affect U.S. Tight Gas Potential

Part 2 – Economics of Tight Gas Production

Conclusion of a Two-Part Series

by Ralph W. Veatch Jr., *Amoco Production Co.*,
and Ovid Baker, *Mobil Research and Development Corp.*

In Part 1 of this series (PETROLEUM ENGINEER INTERNATIONAL, January 1983, pp. 84-96), the technology of tight gas production was described. The advancement in technology needed to develop an improved capability to drain tight gas reservoirs with fewer wells was discussed. In this concluding installment, the economics of tight gas production will be emphasized.

Economics of Tight Gas

The amount of tight gas recoverable in the lower 48 states was shown in Fig. 2 to be dependent on both the improvement in technology and the price received for the gas. As either of these factors increases, operators will be able to produce lower quality gas reservoirs, thus increasing the economically recoverable gas resources. In Fig. 2, a price scale is shown in 1978 dollars and in 1982 dollars. The difference in these prices reflects the effect of inflation over the 4-year period. The same amounts of gas are being produced, only the price has shifted.

The economics calculation procedure is described in detail in Chapter 4 of the NPC report.[1] The basis for the economics included:

- Costs and prices based on a drilling cost index = 82 (1979 = 100).
- All dollars were held constant over the entire period of producing all the gas.
- Gas prices were at point of sale in the field. All capital costs up to the sales meter including lease costs, exploration expenses, wells, wellhead equipment, gathering lines, and field compressors were included in the investment.
- Royalty was one-eighth, taxes 46% federal income tax, 2% state income tax, 8% of producer revenue for production severance and property taxes, 10%

federal investment tax credit on tangible equipment, and unit of production depletion allowance for leasehold costs. Windfall profit taxes do not apply to gas and are not included.

- Intangible drilling and development costs were expensed. Tangible equipment was capitalized and written off under 1979 rules.
- Dry hole costs, unsuccessful exploration, leasehold, and other nonrecoverable costs were charged against successful wells.
- Rates of return include all the losses from unsuccessful exploration and unsuccessful wells.
- Marginal DCF rates of return of 10%, 15%, and 20% after tax were used to select the new reservoir discoveries that would be considered productive. Wildcats that found reservoirs that could not make the marginal rate of return were considered dry wildcats and no development wells were drilled in reservoir. Thus, the lowest quality successful reservoirs had a profitability just above the marginal rate. When these were combined with the more successful ones, the average DCF was above the marginal rate.

The studies made by the NPC are made using constant dollars. There are advantages to the use of constant dollars in the economic evaluation of a proposed future project with a duration of many years. All costs and prices will change with inflation if the project is delayed a few years. If the inflation rates are exactly equal for each of the different costs and prices, the DCF rate of return on the project will remain constant even though the costs change. So the profitability of a project estimated 2 or 7 years ago may still be correct.

In practice, the inflation rate for the different materials and services involved in a project do change at different rates. This is especially so if some of them have a cyclic demand. However, even the cyclic costs and prices move together through time in a rather narrow band of variation. The DCF rate of return estimated several years in the past will still provide an approximate estimate of profitability. In a surprisingly large percentage of cases, even some changes in the assumptions about the physical properties of the gas reservoir do not change the profitability very much.

The alternate procedure involves estimating over many years the inflation rates for each item separately, which may introduce more error than it corrects.

Economic Models

The resources for each of the 82 subbasins studied by the NPC task group were estimated by a model. It incorporates the physical steps in the exploration and development process for each field in the subbasin. Investments, dry holes, production, and sales are properly scheduled to yield financial results, as well as ultimate recovery.

Input to the model comes from estimates made by geologists, production engineers, and economists who are familiar with the area under study. The simulation of an exploration play in more than one basin is accomplished by a second model which provides for scheduling investments in a number of basins over a period of years. This model makes a summation of the individual basin models just described. Output includes annual production, cash flow, and profitability.

TABLE 4. Economics summary

San Juan Basin – base case, Dakota formation

Gas price, $/Mcf 1982 dollars	 1978 dollars	Profitable Prospects,%	 Sections	Productive fields minimum permeability, md	Average DCF rate of return,%	Total gas recov. in basin at price, bcf
3.26	2.50	6	75	0.04	10	0
4.57	3.50	18	225	0.01	22	500
6.52	5.00	56	740	0.004	33	1,500
11.74	9.00	77	1,040	0.001	60	1,800

3,300 bcf in place

Table 4 illustrates the results of the analysis for one formation – the Dakota in the San Juan Basin. The results are shown for several increasing prices with a 15% DCF marginal discount rate.

Prices are shown in 1978 dollars because the NPC report is in these terms. Prices in 1982 dollars are included for the reader's convenience. Refer to the section on investment opportunities for a detailed explanation.

At $3.50/Mcf (1978 dollars) or $4.57/Mcf (1982 dollars) the third column shows 18% of the prospects profitable. We estimated there were about 85 prospects in this formation. The profitable reservoirs at this price had permeabilities in the range of 0.01 to 0.04 md. The minimum profitable permeability at $3.50/Mcf (1978 dollars) or $4.57/Mcf (1982 dollars) is shown as 0.01 md in the fifth column. Lower permeability reservoirs were unprofitable.

The average rate of return at $3.50/Mcf (1978 dollars) or $4.57/Mcf (1982 dollars) is 22% DCF. All 85 prospects are included in the average – the 15 productive ones and the 70 dry ones. The 70 dry ones lose money and the 15 profitable ones do much better than the average.

At $5.00/Mcf (1978 dollars) or $6.52/Mcf (1982 dollars), 48 are productive and 37 are dry; at $9.00/Mcf (1978 dollars) or $11.74/Mcf (1982 dollars), 65 are productive and 20 are dry.

The last column shows 500 bcf of gas recovered from these 15 fields.

To find and produce this gas would require the drilling of 200 dry wells and 500 productive wells.

At higher prices, lower permeability reservoirs can be produced and profitability gradually increases. The number of productive sections (square miles) increases from 225 at $3.50/Mcf (1978 dollars) or $4.57/Mcf (1982

TABLE 5. Geological data summary, San Juan Basin, Dakota formation

Total basin area (sections): 8,000
Type: Blanket
Depth, ft: 7,150
Pressure, psia: 3,090
Temperature, °F: 222
NGL, bbl/MMcf: 5.

Average perm., md	Productive area, sections	H/C gas porosity, %	Net pay thickness, ft	Estimated gas in place at reservoir cond., bcf	Max. recoverable gas, bcf	For each drilling location W/C:		
						Probability that state of nature is productive	Probability that W/C is productive, given that state of nature is productive	
							1st W/C	2nd W/C
0.04	75	5.0	10	184.13	142	0.93	0.95	1.0
0.01	150	4.0	15	441.9	321	0.93	0.95	1.0
0.004	515	3.0	20	1,517.19	1,031	0.93	0.95	1.0
0.001	300	2.25	25	828.0	526	0.85	0.95	1.0
0.0004	148	1.5	30	327.08	193	0.85	0.95	1.0
	1,188			3,298.	2,213			

dollars) to 1,040 sections at $9.00/Mcf (1978 dollars) or $11.74/Mcf (1982 dollars). The percentage recovery of the gas in place increases from 15% to 55% over this price range. No gas recovery is shown at a $2.50/Mcf price because it would not make the marginal profit of 15%.

These type calculations form the basis for the projection of a large increase in gas resources as price increases.

The San Juan Dakota resource estimating procedure was as follows:

1. Maps were prepared of each basin giving the outlines of each formation containing tight gas and measuring its area.
2. The fraction of that formation area productive of tight gas was estimated.
3. The range of permeabilities in the productive area was estimated.
4. The number of sections at each permeability level was estimated.
5. For each permeability level the (a) depth, (b) net pay, (c) porosity, and (d) pressure and temperature were estimated.
6. The gas in place was calculated for each permeability level and associated physical properties.
7. The amount of gas technically recoverable to formation abandonment pressure was calculated – usually about 10% of initial reservoir pressure.
8. The maximum recoverable gas was estimated by reducing the technically recoverable gas by a recovery adjustment factor.[1] These factors are less than one. They decrease as permeability decreases. The factors adjust for the probability of "very tight spots" within the producing field and around its borders.
9. Annual and 30-year cumulative production per well were calculated using a well production simulator model for fractured wells completed in reservoirs of each permeability level.
10. For each permeability level, the engineer calculated the number of wells required per section to produce all the gas. For current field rules, only four wells per section are allowed, so we can't produce all the gas. Often we can produce only about half of it.
11. If the formation is lenticular, the amount of the maximum recoverable gas that can be recovered depends on fracture length and number of wells per section. A model[1] was developed to calculate recovery.
12. After the recoverable gas per section is calculated, the field sizes for tight gas accumulations are estimated.
13. The exploration history of the basin was reviewed and the wildcat success percentage for each permeability level was estimated.

History and Performance, Past and Future

Gas production from the three major producing formations in the San Juan Basin – Dakota, Pictured Cliffs, and Mesa Verde – totals approximately 10.5 tcf, with the Dakota having produced more than 3 tcf. Approximately 10,200 wells have been drilled in these formations.

In delineating areas of future drilling of the Dakota in the San Juan Basin, an area was outlined around the outside of the present Dakota field limits. The outline was restricted to certain limits which were designated by the encountering of updip water or the silting out of sands.

Details of the gas potential distribution are shown in Table 5, indicating a maximum recoverable resource of 2.2 tcf.

A statistical summary of the recent exploration history and performance of the industry in the San Juan basin is shown in Table 6. Data are given for the 1960-1969 period and the 1970-1977 period. The number of wildcat wells, wildcat success rate, and amount of petroleum found per successful wildcat well are shown. These statistics are based on AAPG data with some modifications to eliminate low-risk field extension wells. These data apply to all the formations in the basin that were being explored during this period. Our estimates were limited to the thinner, lower-quality portions of the Dakota formation at the edge of the current producing area.

The 12% successful wildcats reported for the 1970-1977 period indicates that at the prices, 300-ft fractures, and quality of prospects available at that time, no more than 12% of the wells were profitable. The others were classed as dry holes and abandoned. At a price of $3.50/Mcf (1978 dollars) or $4.57/Mcf (1982 dollars) and 1,000-ft fractures with a 15% DCF marginal rate of return, our estimates indicate 18% of the wild-

TABLE 6. Exploration performance – San Juan Basin

	1960-1969			1970-1977			1960-1977		
	All wells	New fields	New pools and deeper prod.	All wells	New fields	New pools and deeper prod.	All wells	New fields	New pools and deeper prod.
Number of successful wildcat wells									
Total	82	35	47	40	38	2	122	73	49
Gas	49	10	39	15	15	0	64	25	39
Oil	26	23	3	25	23	2	51	46	5
Oil and gas	7	2	5	0	0	0	7	2	5
Amount of petroleum found									
Total, million bbl of oil equivalent*	132.6	72.1	60.5	20.9	15.5	5.4	153.5	87.6	65.9
Gas, bcf	349.0	59.0	290.0	29.6	29.6	0	279.6	88.6	290.0
Oil, million bbl	31.4	31.1	0.3	15.3	9.8	5.5	46.7	40.9	5.8
Number of wildcat wells									
Total	507	429	78	327	320	7	834	749	85
Gas†	303	257	46	123	120	3	426	377	49
Oil†	161	136	25	204	200	4	365	336	29
Oil and gas	43	36	7	0	0	0	43	36	7
Number of wildcats oil and gas per year	51	43	8	41	40	1	46	42	4
Percent wildcats successful									
Total	16.2	8.2	60.3	12.2	11.9	28.6	14.6	9.7	57.6
Gas	16.2	3.9	84.8	12.2	12.5	0	15.0	6.6	70.6
Oil	16.1	16.9	12.0	12.3	11.5	50.0	14.0	13.7	17.2
Oil and gas	16.3	5.5	71.4	—	—	—	16.3	5.6	71.4
Amount found/successful wildcat									
Total, million bbl of oil equivalent	1.6	2.1	1.3	0.52	0.41	2.7	1.3	1.2	1.3
Gas, bcf	7.1	5.9	7.4	1.97	1.97	—	5.9	3.5	7.4
Oil, million bbl	1.2	1.4	0.1	0.61	0.43	2.8	0.9	0.9	1.2
Average depth of wells									
Oil, 1,000s, ft	3.52	3.22	3.38	5.28	5.33	5.30	4.38	4.27	4.33
Gas, 1,000s, ft	7.04	6.10	6.88	5.79	5.78	5.78	6.75	5.91	6.5

*Includes gas in solution with oil and condensate produced with gas. Conversion 5.8 Mcf = 1 bbl of oil.

†Estimated by multiplying the number wildcats by the same percentage distribution as the successful wildcats.

cats would be profitable and successful.

The average discovery of 1.97 bcf per successful wildcat at 1970-1977 conditions compares with our projected discovery of 31 bcf per successful wildcat at \$3.50/Mcf (1978 dollars) or \$4.57/Mcf (1982 dollars) and 15% DCF rate of return. Note that the successful new field wildcats increased from 3.9% in the 1960s to 12.5% in the 1970s and could rise to 18% in the 1980s. The decline in reserves found per successful wildcat is an indication that the better prospects were being drilled in the 1960s. This decline is projected to be reversed by higher gas prices and longer fractures as indicated above.

Trap and Reservoir Characteristics

The Dakota of the San Juan basin is different from the producing areas of other basins in that production to some degree can be expected at most any location within the limits as defined by updip water and the silting out of the sands. In other words, localized structural traps are nonexistent and production deviations are the result of changing reservoir characteristics or localized areas of natural fractures.

The exploration simulator was programmed to take these basin characteristics into account. Table 5, the geological data summary, shows state of nature 93% productive for the first three permeability levels and 85% for the last two levels. The first wildcat drilled in a productive area is successful 95% of the time; the second, if needed, always is successful. However, a successful wildcat must meet economic criteria before going on stream and initiating field development. Table 3 shows the percent of prospects that are economically productive is much smaller. Most fields are small, 40% being below 10 bcf and 90% smaller than 60 bcf.

Production

One formation in the San Juan basin is considered potentially productive of tight gas. The productive area is 1,188 sections and the maximum recoverable gas is calculated to be 2,213 bcf.

The geological data in Table 5 are used in both the

TABLE 7. Well production summary – base case, San Juan Basin, Dakota formation

	Gas production, MMcf/year/well									
Year	K, md - 0.4	0.1	0.04	0.01	0.004	0.001	0.0004	0.0001	0.00004	0.00001
1			131	86	62	32	20			
2			84	53	35	17	10			
5			59	34	23	10	6			
10			46	26	17	8	5			
15			38	23	15	7	4			
20			31	21	14	6	3			
30			23	18	12	5	3			
30-year cum. prod., MMcf			**1,323**	**827**	**556**	**263**	**155**			

TABLE 8. Well production summary – advanced case – San Juan Basin, Dakota formation

	Gas production, MMcf/year/well									
Year	K, md - 0.4	0.1	0.04	0.01	0.004	0.001	0.0004	0.0001	0.00004	0.00001
1			289	235	202	117	76			
2			200	148	118	65	40			
5			136	97	74	38	23			
10			99	71	53	28	17			
15			81	59	44	22	14			
20			66	51	39	19	12			
30			49	42	32	16	10			
30-year cum. prod., MMcf			**2,881**	**2,171**	**1,670**	**885**	**545**			

TABLE 9. Production well requirements, San Juan Basin, Dakota formation

	Base case			Advanced case		
Permeability, md	Number of wells/section reqd. to produce all gas	Number of wells/section actually used (max = 4)	Recoverable gas from actual wells, bcf	Number of wells/section reqd. to produce all gas	Number of wells/section actually used (max = 12)	Recoverable gas from actual wells, bcf
0.04	1.4	1.4	142	0.66	0.66	142
0.01	2.6	2.6	321	1.1	1.1	321
0.004	3.6	3.6	1,031	1.2	1.2	1,031
0.001	6.6	4.	318	1.97	1.97	526
0.0004	8.3	4.	93	2.38	2.38	193
			1,905			**2,213**

reservoir and exploration simulators. The production rates estimated with the reservoir simulator for each permeability level are shown in Table 7. These rates are for base-case technology with a fracture half-length of 1,000 ft. Annual gas production in millions of cubic feet per year per well and the cumulative production over a 30-year period are given. The 30-year cumulatives range from 0.155 to 1.323 bcf per well for the five permeability levels studied.

Table 8 shows the data for the advanced technology case with fracture half-lengths of up to 4,000 ft. The 30-year cumulatives for the advanced technology case are more than 100% higher than for the base technology case for all permeability levels.

Production rates for San Juan, Dakota wells will range from about 55 Mcfd to 360 Mcfd for the first year with base technology, depending on permeability level and net pay thickness. With longer fractures, average daily production rates in the first year will range from 200 to 800 Mcfd for the various permeability levels. Rates will decline rapidly, however, and by the fifth year even the best well with advanced technology will be producing only 370 Mcfd.

The Dakota is a blanket sand and the number of wells per section actually drilled will affect the ultimate recovery drastically. Table 9 shows the number of wells per section with both base and advanced technology. With base technology, the number of wells required ranges from 1.4 to 8.3 wells per section. However, with base technology, and thus current well spacing restrictions, only four wells per section are permitted. The effect is to reduce recoverable gas from the maximum of 2,213 bcf, to only 1,905 bcf.

With advanced technology, well spacing could be varied so that the actual number of wells needed could be drilled. For the Dakota, this would range from 0.66 to 2.38 wells per section. With advanced technology, the full 2,213 bcf could be recovered.

TABLE 10. Investment and operating expenses, San Juan Basin, Dakota formation; cost index = 82 (1978)

Geology and geophysics, $/prospect	10,000
Drilling cost, $/well	250,000
Fracture cost, $/well	
– Base case (1,000 ft fracture)	93,700
– Advanced case (2,000-4,000 ft fracture)	318,000
Surface equipment, $/well	45,000
Annual operating expense, $/well	2,500
Compressor fuel cost, ratio of cost to W. I. gas revenue	0.0297

Economic Analysis

The basic geologic and production data were processed with the full cycle exploration and production simulator. The data were evaluated to determine the economics of finding and developing the gas in that particular formation. The investment and operating expenses used to evaluate the Dakota are shown in Table 10.

The output from the simulator is shown in two tables: The economic summary for the base technology case is shown in Table 11; advanced technology economics are summarized in Table 12. Evaluations are made at discount rates of 10%, 15%, and 20% at several gas prices. Each of the 24 cases shown on each table is a complete evaluation. In other words, the entire basin is drilled and developed assuming that this gas price and discount factor prevail.

In each case the table shows the rate of return and the net present value (positive only when the rate of return exceeds the discount rate). When the net present value is not positive, this simply means that none of the gas will be recoverable at this price and discount rate. In Table 11 this occurs at the lowest price of $1.50/Mcf (1978 dollars) at all discount rates, at $2.50/Mcf (1978 dollars) for discount rates of 15% and 20%, and at

TABLE 11. Economics summary

Basin: San Juan
Formation: Dakota
Technology: Base
Date: May 1980

			K-levels on stream		Average per prospect				Basin totals			Wells					
Case no.	Gas price, $/Mcf*	Profit. prosp., %	no.	value**	E & P invest., $M	Gas prod., bcf	Net pres. value, $M	DCF rate of return, %	Gas recover. at price, bcf	Max. recov. GIP, bcf	Max no. prosp. at price	Wildcat success, %	Wildcat Dry	Wildcat Prod.	Development Dry	Development Prod.	Total
Discount rate 10%																	
1601111	1.50	6.2	1	C	1,357	1.889	–292	3.7	—	—	—	5.3	—	—	—	—	—
21	2.50	17.6	2	CD	3,420	5.527	392	13.8	463	463	84	15.1	83	15	120	480	697
31	3.10	56.2	3	CDE	12,477	16.165	1,690	15.8	1,494	1,494	92	48.3	55	52	569	2,277	2,953
41	3.50	"	"	"	"	"	2,602	19.1	"	"	"	"	"	"	"	"	"
51	5.00	"	"	"	"	"	6,040	32.7	"	"	"	"	"	"	"	"	"
61	7.00	76.9	4	CDEF	19,475	21.227	11,711	40.8	1,812	2,020	85	66.1	33	65	839	3,355	4,293
71	9.00	"	"	"	"	"	17,468	59.9	"	"	"	"	"	"	"	"	"
81	12.00	88.7	5	CDEFG	24,132	23.224	26,920	77.1	1,905	2,213	82	76.3	23	73	1,010	4,040	5,145
Discount rate 15%																	
12	1.50	0	0	–	702	—	–428	0	—	—	—	0	—	—	—	—	—
22	2.50	6.2	1	C	1,357	1.889	–200	9.6	—	—	—	5.3	—	—	—	—	—
32	3.10	17.6	2	CD	3,420	5.527	259	18.5	463	463	84	15.1	83	15	120	480	697
42	3.50	"	"	"	"	"	488	21.7	"	"	"	"	"	"	"	"	"
52	5.00	56.2	3	CDE	12,477	16.165	3,202	32.7	1,494	1,494	92	48.3	55	52	569	2,277	2,953
62	7.00	"	"	"	"	"	6,400	53.0	"	"	"	"	"	"	"	"	"
72	9.00	76.9	4	CDEF	19,475	21.227	10,639	59.9	1,812	2,020	85	66.1	33	65	839	3,355	4,293
82	12.00	"	"	"	"	"	16,670	91.4	"	"	"	"	"	"	"	"	"
Discount rate 20%																	
13	1.50	0	0	–	702	—	–437	0	—	—	—	0	—	—	—	—	—
23	2.50	6.2	1	C	1,357	1.889	–304	9.6	—	—	—	5.3	—	—	—	—	—
33	3.10	"	"	"	"	"	–217	12.8	—	—	—	"	—	—	—	—	—
43	3.50	17.6	2	CD	3,420	5.527	96	21.7	463	463	84	15.1	83	15	120	480	697
53	5.00	56.2	3	CDE	12,477	16.165	1,680	32.7	1,494	1,494	92	48.3	55	52	569	2,277	2,953
63	7.00	"	"	"	"	"	4,079	53.0	"	"	"	"	"	"	"	"	"
73	9.00	"	"	"	"	"	6,479	74.5	"	"	"	"	"	"	"	"	"
83	12.00	76.9	4	CDEF	19,475	21.227	11,431	91.4	1,812	2,020	85	66.1	33	65	839	3,355	4,293

*These prices from the NPC report had a price index of 82 (1979 = 100). This index value actually occurred in 1978. To adjust prices to 1982 dollars use the 1982 index which will be available in 1983 or 1984. In this article we have estimated the 1982 index = 107 for tight gas wells and prices in this table should increase by a factor = 107/82 = 1.305. Investments should be multiplied by 1.305 also. DCF values are unchanged.

**Code:	C	D	E	F	G
	0.04	0.01	0.004	0.001	0.0004

TABLE 12. Economics summary

Basin: San Juan
Formation: Dakota
Technology: Advanced
Date: May 1980

			K-levels on stream		Average per prospect				Basin totals			Wells					
Case no.	Gas price, $/Mcf*	Profit. prosp., %	no.	value**	E & P invest., $M	Gas prod., bcf	Net pres. value, $M	DCF rate of return, %	Gas recover. at price, bcf	Max. recov. GIP, bcf	Max no. prosp. at price	Wildcat success, %	Wildcat Dry	Wildcat Prod.	Development Dry	Development Prod.	Total
Discount rate 10%																	
1601211	1.50	17.6	2	CD	2,874	5.527	–182	7.9	—	—	—	15.1	—	—	—	—	—
21	2.50	56.2	3	CDE	7,950	16.165	2,360	23.1	1,494	1,494	92	48.3	55	52	189	757	1,053
31	3.10	"	"	"	"	"	3,802	31.7	"	"	"	"	"	"	"	"	"
41	3.50	76.4	4	CDEF	13,979	22.621	5,577	30.2	2,020	2,020	89	66.1	35	68	343	1,372	1,819
51	5.00	"	"	"	"	"	10,682	52.3	"	"	"	"	"	"	"	"	"
61	7.00	88.7	5	CDEFG	18,840	25.786	18,864	72.3	2,213	2,213	86	76.3	24	76	456	1,825	2,381
71	9.00	"	"	"	"	"	26,700	104.0	"	"	"	"	"	"	"	"	"
81	12.00	"	"	"	"	"	38,455	150.8	"	"	"	"	"	"	"	"	"
Discount rate 15%																	
12	1.50	6.2	1	C	1,552	1.889	–508	2.3	—	—	—	5.3	—	—	—	—	—
22	2.50	56.2	3	CDE	7,950	16.165	1,018	23.1	1,494	1,494	92	48.3	55	52	189	757	1,053
32	3.10	"	"	"	"	"	2,039	31.7	"	"	"	"	"	"	"	"	"
42	3.50	"	"	"	"	"	2,720	37.5	"	"	"	"	"	"	"	"	"
52	5.00	76.9	4	CDEF	13,979	22.621	6,529	52.3	2,020	2,020	89	66.1	35	68	343	1,372	1,819
62	7.00	88.7	5	CDEFG	18,840	25.786	12,037	72.3	2,213	2,213	86	76.3	24	76	456	1,825	2,381
72	9.00	"	"	"	"	"	17,625	104.0	"	"	"	"	"	"	"	"	"
82	12.00	"	"	"	"	"	26,007	150.8	"	"	"	"	"	"	"	"	"
Discount rate 20%																	
13	1.50	0	0	–	1,039	—	–620	0	—	—	—	0	—	—	—	—	—
23	2.50	17.6	2	CD	2,874	5.527	–128	17.4	—	—	—	15.1	—	—	—	—	—
33	3.10	56.2	3	CDE	7,950	16.165	1,068	31.7	1,494	1,494	92	48.3	55	52	189	757	1,053
43	3.50	"	"	"	"	"	1,582	37.5	"	"	"	"	"	"	"	"	"
53	5.00	"	"	"	"	"	3,517	59.7	"	"	"	"	"	"	"	"	"
63	7.00	76.9	4	CDEF	13,979	22.621	7,874	84.0	2,020	2,020	89	66.1	35	68	343	1,372	1,819
73	9.00	88.7	5	CDEFG	18,840	25.786	12,416	104.0	2,213	2,213	86	76.3	24	76	456	1,825	2,381
83	12.00	"	"	"	"	"	18,799	150.8	"	"	"	"	"	"	"	"	"

*These prices from the NPC report had a price index of 82 (1979 = 100). This index value actually occurred in 1978. To adjust prices to 1982 dollars use the 1982 index which will be available in 1983 or 1984. In this article we have estimated the 1982 index = 107 for tight gas wells and prices in this table should increase by a factor of 107/82 = 1.305. Investments should be multiplied by 1.305 also. DCF values are unchanged.

**Code:	C	D	E	F	G
	0.04	0.01	0.004	0.001	0.0004

(Continued)

$3.10/Mcf (1978 dollars) for a discount rate of 20%. As price increases, net present value becomes positive and some gas becomes recoverable. For example, in Case 32, at a 15% rate of return and $3.10/Mcf (1978 dollars), present value is $259,000 and 463 bcf of gas become recoverable. Note also that permeability levels from 0.04 to 0.01 md will be economic.

All lower permeability levels were tested by wildcats but proved uneconomic. As price increases, both net present worth and recoverable gas increase; i.e., at $9.00/Mcf (1978 dollars), gas from permeability levels from 0.04 to 0.0001 md is recoverable. However, the base case recovery is still less than the maximum which could be recovered with advanced technology, as shown in Table 12.

The tables also show the investment required per prospect and the maximum number of prospects available in the basin at the price. The total number of wells required is also shown. Comparison of Tables 11 and 12 will show the effect of advanced technology.

Investment Opportunities

These same procedures were used to evaluate each of the 82 subbasins. The results are all given in the NPC report.[1] Variations in profitability between subbasins are quite large. The range of the variations, indicated in Table 13, shows that investors should be very selective in choosing areas for exploration. All of the economics are based on the assumption that the gas can be sold fairly promptly after a reasonable productive capacity has been developed in the newly discovered field. This encourages drilling near pipelines that need to buy gas. Many of these subbasins cannot be developed adequately until new pipelines are built into the area. Shut-in gas wells can reduce profitability fast.

TABLE 13. Ranking of tight gas investments; DCF rates of return expected using current technology

1982 price $/Mcf index = 107	3.26	4.57	6.52
1978 price $/Mcf index = 82	2.50	3.50	5.00
Basin or trend	**DCF for selected subbasins**		
Southwest recompletions	5-49	14-78	23-122
Uinta	37-84	22-119	33-163
Green River	20-58	21-90	21-132
Wind River	19-44	26-75	30-118
Piceance	18-31	21-48	39-65
Edwards lime	24	15-36	18-55
Cotton Valley	22	34	50
Northern Great Plains/Williston	17-29	15-39	16-52
San Juan	10	22	33
Val Verde, Sonora, and Ozona	0-9	6-15	18-21
Denver	0	0	4

The prices in Table 13 are related by changes in drilling cost in tight gas areas. The NPC report attempted to make all costs in constant dollars as of Jan. 1, 1979. The project was started in late 1978 and IPAA drilling cost data[3] for 1979 were not published until February 1981. The NPC report was issued in December 1980. The task group used 1977 IPAA drilling cost data and increased them by 18.72% as an approximation of Jan. 1, 1979 costs. Later data indicate that this cost level occurred during 1978. The index number for the prices in the NPC report is 82.0.

TABLE 14. Assumptions of competitive tight gas prices, 1982-2000

Year	Tight gas drilling cost index	Adjusted NPC specific tight gas prices from index = 82.0 to year in table, $/Mcf			Assumed wellhead market price for gas, based partly on crude oil prices, $/Mcf
		2.50	3.50	5.00	
1976	52.0	1.58	2.22	3.17	
1977	69.1	2.11	2.95	4.21	
1978	85.5	2.61	3.65	3.81	
1979	100.0	3.04	4.27	6.10	
1980	96.4	2.93	4.11	5.88	
1981	108.8	3.32	4.64	6.63	
1982 est.	107.0	3.26	4.57	6.52	5.27
Assumed					
1983	113.7	3.47	4.85	6.93	4.69
1984	120.5	3.67	5.14	7.35	4.69
1985	127.7	3.89	5.45	7.79	4.97
1986	135.4	4.12	5.78	8.26	5.27
1987	143.5	4.38	6.13	8.75	5.59
1988	150.7	4.59	6.43	9.19	5.92
1989	158.2	4.82	6.75	9.65	6.28
1990	166.1	5.06	7.09	10.13	6.65
1995	212.0	6.46	9.05	12.92	10.23
2000	270.	8.23	11.52	16.46	15.74

Investors must take a look into future costs and prices. The NPC report[1] (p. 28, Part 1) gave an estimate based on high inflation rates. Another estimate, based on low inflation rates, is shown in Table 14. As the price of gas has increased, consumers have begun to conserve energy and seek lower cost fuels. The result has been uncertainty about future prices[4] of gas, and some gas transmission companies have exercised price reduction options in recent contracts.

An index for tight gas drilling costs was based on drilling cost per foot in the depth range of 7,500 to 9,999 ft. This is the depth of many of the tight gas reservoirs. These costs per foot were taken from the states of Colorado, New Mexico, Texas District 6, Utah, and Wyoming where much of the tight gas resource is located. The 1979 index is equal to 100. The index values for some recent years are given in Table 14 for the period 1976 to 1981. About a 5% decline is assumed for 1982 with increases of 6% per year for 1983 to 1988, and 5% per year from 1989 to 2000.

These indexes were used to adjust constant dollar NPC prices to current NPC prices for years 1976 to 2000. These adjusted NPC prices were compared with

TABLE 15. Type of tight gas areas being drilled in 1979-1982 period*

Permeability range, md	Permeability range, microdarcies	Tight gas area, requested for approval, millions of acres	Percent of area	Percent of formations
0.1-0.03	100-30	65.4	66	64
0.03-0.01	30-10	27.1	28	26
0.01-0.003	10- 3	3.6	4	7
0.003-0.001	3- 1	2.1	2	3
0.001-0.0003	1- 0.3	0	0	0
Less than 0.1	<100	52		
		150.2	100	100

*Reference: *Oil and Gas J.* (April 26,1982) 69; (May 3, 1982) 100.

TABLE 16. U.S. potential tight gas production rates, tcf/year

	1978 price, $/Mcf (Index = 82)	1980	1985	1990	1995	2000
From reserves discovered before 1980		0.8	0.6	0.5	0.4	0
From reserves discovered in 1980 and later	$2.50 and 15% DCF	0	0.1	1.1	3.2	5.8
From reserves discovered in 1980 and later	$3.50 and 15% DCF	0	0.1	1.3	4.2	7.0
From reserves discovered in 1980 and later	$5.00 and 15% DCF	0	0.2	1.8	5.2	8.3
From reserves discovered in 1980 and later	$9.00 and 15% DCF	0	0.2	2.5	6.8	10.5

assumed wellhead gas prices based on 80% of crude oil energy equivalent prices.

The comparison of NPC adjusted prices and market prices indicates that the resource and production schedules for the $2.50/Mcf Case (Index = 82) could be profitable for all years through 2000. Since the $3.50/Mcf (1978 dollars) Case (Index = 82) adjusted prices for most forward years are only 3% to 10% greater than the market prices, many of these resources may be profitable also. The $3.50/Mcf (1978 dollars) Case is shown profitable for the 1990-2000 period.

Current Tight Gas Developments

Tight gas development has been proceeding more rapidly than many had anticipated. The regulatory agencies have responded quickly to operator applications for classifying tight gas areas so that they may qualify for the incentive ceiling prices if they can find buyers willing to pay that much. Table 15 summarizes data on recent developments.

By April 1982, applications to drill more than 8,000 tight gas wells had been received by the Federal Energy Regulatory Commission. Over 6,000 wells have been drilled. Some 140 operators have applied to FERC for tight gas sand designation of 100 formations covering 243,000 sections. This is about 24% of the estimated prospective area for tight gas in the lower 48 states. Approved tight gas areas are located in 15 states.

Operators are being cautious in selecting tight gas areas for drilling. Although the tight gas ceiling price is over $5.27/Mcf (1982 dollars), some purchasers are reluctant to pay these prices. Competition from coal and heavy fuel oil is expected to grow stronger in the coming years. Operators have tended to concentrate their wells nearer large markets. They also have avoided the lower permeability formations. About 94% of the approved tight gas areas and 90% of the formations are in the 0.01 to 0.1 md range of permeability.

The NPC report[1] made future production estimates of tight gas based on price and potential resources. These estimates are given in Table 16 for several gas prices in terms of 1978 dollars (Index = 82).

These production rates are potential only. This amount of tight gas could be produced if there is a market for it at the prices indicated. The prices for the year indicated are estimated in Table 14 for low inflation rates. The U.S. has a large potential gas energy resource when we need it.

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Ralph W. Veatch Jr. is a research supervisor of fracturing at the Amoco Production Co. Research Center, Tulsa, Okla. He earned BS and MS degrees in petroleum engineering and a PhD in engineering science from the University of Tulsa and is a registered professional engineer in Louisiana, Oklahoma, and Texas. He worked previously as a petroleum engineer with Amoco in Louisiana, Mississippi, and Texas, and was an associate professor in petroleum engineering at the University of Southwestern Louisiana in Lafayette. He has worked in well completion, well stimulation, and fracturing research with Amoco for 10 years. In 1978 he was an SPE Distinguished Lecturer on massive hydraulic fracturing.

Veatch is active in numerous SPE committees and has been a past director of the Mid-Continent and Evangeline local sections. He served 2 years as an active member of a National Petroleum Council Task group studying U.S. tight gas reservoirs. He is currently a director of the SPE Mid-Continent Section, a member of the API Subcommittee on the Evaluation of Fracturing Materials, and chairman of the API Production Research Technical Advisory Committee on the Rheological Characterization of Fracturing Fluids.

Ovid Baker has sought solutions to the economic and technical challenges of the natural gas industry since 1939. He had assignments as research engineer, process engineer, economist, and research planner for Magnolia Petroleum and Mobil Oil. His current title is economist, Mobil Research and Development Corp.

Baker has published 22 technical papers dealing with gas and gas-liquid pipelines, phase behavior, gas processing, economics, and risk analysis. He holds 13 U.S. patents including 5 in subsea production systems. He has served as chairman of engineering committees for AGA, API, Gas Processing Association, AIChE, and the National Petroleum Council's Tight Gas Reservoirs Task Group. He received a BS in chemical engineering from Texas Tech University, and the College of Engineering of that university named him a Distinguished Engineer in 1976. He also was honored for Outstanding Achievements in Chemical Engineering in 1967 by the Dallas section of the Institute for Chemical Engineers in recognition of his contributions to two-phase and multiphase flow in pipelines. ■

Circle 242 on Reader Service Card

Drilling Expenditures Reach $36 Billion In U.S. In 1981

Total expenditures for drilling and equipping oil and gas wells and dry holes in the U.S. in 1981 amounted to more than $36 billion, an increase of $13 billion, or 60.8%, over 1980.

Average cost per well during 1981, however, registered an increase of only 23.4% — from $367,682 in 1980 to $453,691 in 1981. According to the 1981 Joint Association Survey on Drilling Costs, average cost per foot that year came to $94.30. Average well depth was 4,811 ft. The survey, which is sponsored by the American Petroleum Institute, the Independent Petroleum Association of America, and the Mid-Continent Oil and Gas Association, says that the total number of wells drilled in 1981 increased by 30.3%, and the total footage drilled increased by 31.3%.

Offshore, the total cost of wells completed in 1981 amounted to more than $5.5 billion, an increase of 44.3% over 1980. The total number of offshore wells increased 16% over 1980, while the average depth decreased by 0.6%. The average cost per foot offshore in 1981 was $384.87, an increase of 25.1%.

Breaking 1981's wells down by oil, gas, and dry-hole categories, the survey finds that the average depth of oil wells completed in 1981 was 4,183 ft, an increase of 2%. Average cost per foot in 1981 was $80.40, an increase of 21.2% over the previous year.

The average depth of gas wells in 1981 was 5,718 ft, a 1.5% increase over 1980. Average cost per foot was $122.17, compared with $95.16 in 1980.

Dry holes were drilled to an average depth of 5,154 ft in 1981, an increase of 0.9%. Average cost per foot was $90.03, a 22.2% increase over 1980.

Estimated per-well costs for drilling and equipping wells in the U.S., by depth intervals (1981)

		Total number of wells Average footage drilled and average costs			
Depth interval, ft		Oil wells	Gas wells	Dry holes	Total
	wells	6,140	718	2,136	8,994
0-1,249	Avg footage	834	887	740	816
	Avg costs $	38,997	45,783	31,155	37,677
	wells	7,200	2,545	3,357	13,102
1,250-2,499	Avg footage	1,796	2,002	1,869	1,855
	Avg costs $	86,069	80,016	58,805	77,907
	wells	7,910	2,877	4,780	15,567
2,500-3,749	Avg footage	3,150	3,213	3,188	3,173
	Avg costs $	155,023	150,280	98,262	136,718
	wells	5,316	3,466	4,426	13,208
3,750-4,999	Avg footage	4,377	4,276	4,371	4,349
	Avg costs $	240,387	205,612	150,422	201,114
	wells	5,659	3,335	4,678	13,672
5,000-7,499	Avg footage	6,100	6,044	6,078	6,079
	Avg costs $	431,507	416,199	303,507	383,977
	wells	4,860	2,090	2,528	9,478
7,500-9,999	Avg footage	8,641	8,613	8,594	8,622
	Avg costs $	820,180	943,823	741,798	826,539
	wells	1,204	1,351	1,460	4,015
10,000-12,499	Avg footage	10,953	11,041	11,096	11,034
	Avg costs $	1,593,626	1,803,737	1,531,762	1,641,830
	wells	364	666	740	1,770
12,500-14,999	Avg footage	13,351	13,546	13,539	13,503
	Avg costs $	2,670,053	3,096,781	2,602,164	2,802,235
	wells	60	326	319	705
15,000-17,499	Avg footage	15,976	16,162	16,034	16,088
	Avg costs $	4,328,184	5,078,961	4,177,631	4,607,229
	wells	11	116	91	218
17,500-19,999	Avg footage	18,397	18,567	18,544	18,549
	Avg costs $	6,403,588	8,046,313	7,289,930	7,647,685
	wells	1	43	43	87
20,000 & over	Avg footage	21,248	21,881	21,884	21,875
	Avg costs $	10,802,432	9,711,230	12,604,923	11,153,989
	wells	38,725	17,533	24,558	80,816
Totals	Avg footage	4,183	5,718	5,154	4,811
	Avg costs $	336,289	698,576	463,984	453,691

Expenditures for drilling and equipping wells in the U.S. during 1980 and 1981

	Oil wells		Gas wells		Dry holes		Total wells	
	1980	1981	1980	1981	1980	1981	1980	1981
Wells drilled	28,553	38,725	15,225	17,533	18,233	24,558	62,011	80,816
Footage drilled (000)	117,066	161,982	85,820	100,258	93,145	126,561	296,031	388,800
Total expenditures, millions*	$7,768	$13,023	$8,167	$12,248	$6,865	$11,395	$22,800	$36,665
Average depth (ft)	4,099	4,183	5,636	5,718	5,108	5,154	4,773	4,811
Average cost per well*	$272,070	$336,289	$536,402	$698,576	$376,525	$463,984	$367,682	$453,691
Average cost per foot*	$66.36	$80.40	$95.16	$122.17	$73.70	$90.03	$77.02	$94.30

*Includes all money paid for drilling and equipping wells through the Christmas tree.

On a state-by-state basis, almost a third of 1981's $36-billion drilling tab was spent in Texas, where 25,139 wells cost more than $12 billion, or $477,782 apiece. Average depth of Texas wells was 5,369 ft.

Louisiana's drilling bill came to more than $7 billion for 5,619 wells. They were drilled to an average total depth of 6,692 ft, and they cost an average of $1,269,385 to drill and complete.

Oklahoma's 11,639 wells cost more than $5 billion, or an average of $450,544 apiece. Total depth in the Sooner State averaged 4,975 ft.

Alaska continues to be the most expensive state in which to drill. Total expenditures there topped $672 million in 1981 for 156 wells drilled to an average total depth of 10,277 ft. Average cost per well came to $4,312,574. Much of this cost is weather-related, of course, but average depth also is a major contributor. Wells in the Sunshine State, for example, cost more than $2 million apiece, despite their weather advantage. Florida's 25 wells were drilled to an average total depth of 12,626 ft in 1981. Their total tab came to more than $56 million.

Conversely, Kentucky's 1,940 wells cost only $54,750 apiece. Their average total depth was 1,514 ft. Likewise, Indiana's 803 wells cost an average of $59,807 in 1981. Their average total depth was 1,910 ft.

The country's 16,527 exploratory wells cost an average of $737,265 in 1981. Their total depth averaged 6,117 ft. Development drilling accounted for some two-thirds of the year's expenditures. Average cost for the 64,289 development wells came to $380,791. Their average total depth was 4,474 ft.

Drilling Rig For Tunisian Desert

USS Oilwell Supply Co. International has completed a 20,000-ft drilling rig for Compagnie Tunisienne de Forage (CTF) for service in the southern desert of Tunisia.

The rig, done on a turnkey basis, features a 142-ft mast with 1 million-lb static hook capacity. Because it will work remote areas, redundancy was designed into the rig's systems. The SCR house features three 5-ton air conditioners, the mud cleaning facilities are heavier than normal, and the mud tanks feature eight zinc anodes in each tank because of the highly alkaline water.

International Rig Count Reflects Global Decline

The Middle East, helped in no small measure by the return of Iran and Iraq to Hughes Tool Co.'s International Rotary Drilling Rig Report, was the only region of the world to begin 1983 with a rig count that was higher than at the same time last year.

Biggest loser during the period was Latin America, which was off by 56 rigs — 33 of them traceable to Mexico. Europe was down by 19 rigs, and African activity declined by 17. The South Pacific was off by 12.

Despite an overall decline of 48 rigs during the January-to-January period, it is interesting to note that the number of offshore rigs actually increased — by 19. Even Latin America was ahead offshore, despite its overall decline. And, only Europe showed a decline in offshore activity.

The most active Free World country (not counting the U.S. and Canada) continues to be Mexico.

International Rotary Rig Report, prepared by Hughes Tool Co.

(Figures in parentheses indicate how many of each country's rigs are offshore rigs.)

	Jan. 1982	Dec. 1982	Jan. 1983
Africa			
Algeria	77	90	80
Angola	8(6)	13(9)	13(9)
Benin	0	1(1)	1(1)
Cameroun	6(6)	7(6)	7(6)
Chad	1	1	1
Gabon	15(11)	10(8)	10(8)
Guinea Rep.	0	1(1)	1(1)
Ivory Coast	6(6)	5(5)	5(5)
Libya	33(2)	28(1)	23(2)
Morocco	6(1)	5	5
Niger	5	1	1
Nigeria	28(9)	21(11)	21(11)
Rep. of Congo	7(2)	5(1)	5(1)
Rep. of Zaire	3(1)	2(1)	2(1)
Senegal	0	1	1
Sierra Leone	0	1(1)	1(1)
South Africa	2(2)	2(2)	2(2)
Sudan	2	3	3
Tunisia	11(3)	11(3)	11(3)
	210(52)	208(53)	193(54)
Europe			
Austria	10	8	11
Denmark	2(2)	2(2)	2(2)
France	30(2)	13	13
Germany	30	31	33
Greece	6(3)	4(2)	4(2)
Holland	18(9)	23(15)	16(12)
Italy	33(8)	37(7)	37(7)
Norway	12(12)	12(12)	11(11)
Portugal	1	1	1
Spain	12(3)	10(4)	10(4)
Switzerland	1	1	1
United Kingdom	62(58)	53(50)	56(53)
Yugoslavia	22	25	25
	239(97)	220(92)	220(91)
Far East			
Bangladesh	4	4	2
Brunei	8(7)	13(9)	13(9)
Burma	31	34(1)	34(1)
India	49(8)	54(12)	54(12)
Indonesia	87(29)	93(33)	90(33)
Japan	21(6)	19(2)	19(2)
Malaysia	14(14)	11(11)	11(11)
Pakistan	19	18	18
Philippines	17(3)	12(1)	10(1)
Taiwan	5	0	0
Thailand	8(5)	7(4)	9(4)
	263(72)	265(73)	260(73)
Latin America			
Argentina	66(4)	70(1)	62(1)
Barbados	1	1	1
Bolivia	13	8	7
Brazil	92(31)	100(36)	100(34)
Chile	6(3)	6(3)	6(3)
Colombia	25	21(1)	22(1)
Costa Rica	0	1	1
Dominican Rep.	1	0	0
Ecuador	6(1)	6(1)	5(1)
Guatemala	7	4	3
Mexico	220(19)	187(22)	187(22)
Paraguay	1	0	0
Peru	25(5)	18(5)	18(5)
Trinidad	15(7)	10(5)	11(5)
Venezuela	64(16)	68(18)	63(18)
	542(86)	500(92)	486(90)
Middle East			
Abu Dhabi	35(16)	44(27)	44(27)
Bahrain	1	1	1
Dubai	3(2)	2(1)	4(2)
Egypt	30(19)	39(21)	40(22)
Iran	0	11(2)	11(2)
Iraq	5	28	28
Kuwait	3	5	5
Oman	11	12(2)	12(2)
Gatar	6(3)	3(1)	4(2)
Ras al Khaimah	1	2(1)	2(1)
Saudi Arabia	29(13)	28(12)	28(12)
Sharjah	3(1)	2	1
Syria	16	15	15
Turkey	26	33	33
Umm al Qaiwain	1	1	1
	170(54)	226(67)	229(70)
South Pacific			
Australia	38(9)	27(10)	26(11)
New Zealand	2(1)	1	1
Papua New Guinea	0	0	1(1)
	40(10)	28(10)	28(12)
Totals	**1,464 (371)**	**1,447 (387)**	**1,416 (390)**

Southeast Search For Sonat And Champlin

Sonat Exploration Co. and Champlin Petroleum Co. are conducting a joint oil and gas exploration and development program in Alabama, Georgia, and Tennessee. The two companies hold leases on approximately 510,000 acres in the southern Appalachian Mountains.

New Guidelines For Rig-Hand Protection

New federal guidelines for protecting workers exposed to kelly bushings and portions of rotary tables used on drilling rigs have been approved by the Occupational Safety and Health Administration (OSHA) following a review of guarding standards as they apply to drilling equipment.

"The success of the experiment con-

Industry-wide slump keeps profits down

Petroleum industry profits continued to be adversely affected by poor economic conditions worldwide. The 65 oil companies responding to our survey report a 19.9% drop in earnings for the fourth quarter and a 19.8% decrease for the year. Profit margin for the group fell from 5.1% to 4.4%.

Mobil Corp.'s earnings dropped 52% in the fourth quarter, from $587 million to $282 million. U.S. oil earnings fell due to higher exploration expenses, low crude prices, and reduced demand for natural gas. Foreign oil earnings plunged 44% because of reduced liftings in the Middle East, higher exploration expenses, higher tax provisions in Norway, and lower crude prices.

Throughout 1982, petroleum supply exceeded demand, causing downward pressure on petroleum prices. As a result, Texaco reported a 39.6% decline in earnings for the quarter and a 44.5% drop for the year. The company also blamed OPEC for failing to recognize the realities of the marketplace, regarding both demand and the impact of spot market activity.

Gulf Oil's fourth quarter earnings dropped 24.5%, from $301 million to $226 million. Earnings for the year fell 26.9%. Gulf's chairman, James E. Lee, is not surprised that demand for the company's products fell for the third year in a row, "with much of industrial America flat on its back and the economies of Canada and Western Europe in a recession." The most seriously affected areas of Gulf's business was refining, marketing, and chemicals. Lower interest income, coupled with higher interest expense, also reduced net income.

Increased crude oil production, higher natural gas prices, and lower exploration expense and dry hole costs, generally offset the negative impact of lower crude prices, lower natural gas production, and higher writeoffs at Shell Oil. Net income for the quarter fell from $458 million to $438 million, a 4.4% decline. Earnings for the year were down 5.6%.

Sun Co. reported a 66.3% drop in earnings for the fourth quarter and a 50.1% decline for the year. Profit from U.S. exploration and production fell to $145 million from $165 million and after-tax costs of $22 million due to trimming of its workforce contributed to the decline.

Higher exploration expenses and increased interest costs combined to cause a 2.9% drop in net income for the quarter and a 3.5% decrease for the year at Standard Oil (Ohio).

Atlantic Richfield's earnings for the year increased slightly to $1.676 billion from $1.671 billion in 1981. Increased production of crude oil from the North Slope of Alaska, higher prices for natural gas, and improved earnings from refining and marketing were the principle reasons for the increase. Net income for the quarter fell 7.6%.

Smaller losses for overseas downstream operations and higher Canadian petroleum earnings were behind Standard Oil (Indiana)'s 8.1% fourth quarter gain in net income. Earnings for the year were down 5%, benefiting from a significant recovery in U.S. refining, marketing, and transportation activities.

Exxon reported earnings in the fourth quarter of $1.48 billion compared to $1.38 billion in the same period of 1981, an increase of 6.9%. For the year, net income dropped 13.3%, from 4.18 billion in 1982 to $4.82 billion in 1981.

Higher charges attributable to their expanded exploration program, reduced American Petrofina's net income in the fourth quarter to $14.8 million, a 12.7% decline from 1981's $16.9 million. Earnings for the year dropped 26.6%.

Belco Petroleum reported a 5.3% increase in net income for the quarter and a 5.8% rise for the year, due primarily to higher natural gas production and prices in the U.S., higher oil and gas production in Peru, and higher oil and gas production coupled with significantly

OIL COMPANIES' FOURTH QUARTER FINANCIAL REPORTS

Company	Three months ending December 31**						Twelve months ending December 31**						Profit Margin	
	Revenues ($000)			Earnings* ($000)			Revenues ($000)			Earnings* ($000)				
	1982	1981	% Chg.	1982	1981	% Chg.	1982	1981	% Chg.	1982	1981	% Chg.	1982	1981
Amerada Hess	2,116,414	2,339,424	- 9.5	43,613	48,248	- 9.6	8,394,085	9,443,630	- 11.1	168,662	212,591	- 20.7	2.0	2.3
American Petrofina	530,350	531,209	- 0.2	14,835	16,989	- 12.7	2,253,678	2,522,154	- 10.6	54,401	74,140	- 26.6	2.4	2.9
Argonaut Energy	623	2,366	- 73.7	(677)	164		2,221	5,870	- 62.2	2,606	(151)		17.3	
Ashland Oil	2,079,812	2,409,350	- 13.7	23,722	42,020	- 43.5	8,780,340	9,885,230	- 11.2	124,586	94,592	+ 31.7	1.4	1.0
Asamera							449,241	470,593	- 4.5	3,597	9,693	- 62.9	0.8	2.1
Atlantic Richfield	7,095,135	7,140,262	- 0.6	434,007	469,818	- 7.6	26,990,557	28,208,255	- 4.3	1,676,078	1,671,290	+ 0.3	6.2	5.9
Belco Petroleum	98,330	82,333	+ 19.4	27,769	26,366	+ 5.3	344,367	317,098	+ 8.6	104,034	98,350	+ 5.8	30.2	31.0
Brock Exploration[1]	2,280	2,808	- 18.8	215	558	- 61.5	5,370[2]	6,267[2]	- 14.3	(350)[2]	581[2]			9.3
Callon Petroleum[3]	6,193	3,627	+ 71.0	75	327	- 77.1	21,510	11,432	- 88.2	1,446	1,689	- 14.4	7.0	15.0
Commonwealth Oil Refin.	19,800	203,500	- 90.3	23,800	175,700	- 86.4	307,800	1,012,900	- 69.6	45,900	258,700	- 82.3	14.9	25.5
Crown Central	497,202	422,061	+ 17.8	4,598	14,865	- 69.1	1,782,000	1,502,000	+ 18.6	7,016	3,362	+108.7	0.4	0.2
Damson Oil[4]	71,803	49,766	+ 44.3	6,134	5,096	+ 20.4							8.5	10.2
Diamond Shamrock	755,339	872,548	- 13.4	46,196	59,733	- 22.7	3,177,379	3,376,215	- 5.9	149,543	230,156	- 35.0	4.7	6.8
Dorchester Gas[3]	409,516	228,299	+ 79.4	5,614	5,450	+ 3.0	1,159,101[6]	712,033[6]	+ 62.8	17,812[6]	31,287[6]	- 43.1	1.5	4.4
Dyco Petroleum	12,810	13,759	- 6.9	3,597	4,624	- 22.2	56,509	49,182	+ 14.9	15,532	14,992	+ 3.6	27.5	30.5
Engle Exploration1	1,080	153	+605.9	(650)	(114)		2,524[2]	569[2]	+343.6	(1,411)[2]	(234)[2]			
Enstar Corp.	80,479	100,589	- 20.0	11,125	8,812	+ 26.3	342,796	360,842	- 5.0	42,103	41,567	+ 1.3	12.3	11.5
Equity Oil	6,334	6,192	+ 2.3	1,364	1,292	+ 5.6	23,674	24,951	- 5.1	3,268	5,572	- 41.3	13.8	22.3
Exxon	26,393,545	29,756,561	- 11.3	1,480,932	1,385,215	+ 6.9	103,558,545	114,922,561	- 9.9	4,185,932	4,826,215	- 13.3	4.0	4.2
Felmont	19,450	22,820	- 14.8	3,005	4,353	- 31.0	77,472	79,091	- 2.0	14,037	16,749	- 16.2	18.1	21.2
Forest Oil Corp.	36,410	38,523	- 5.5	2,109	1,507	+ 40.0	152,465	142,335	+ 7.1	12,009	5,104	+135.3	7.9	3.6
Freeport McMoRan	191,831	199,754	- 4.0	(17,447)	26,059		747,888	835,404	- 10.5	65,946	159,366	- 58.6	8.8	19.1
General American	88,907	85,645	+ 3.8	12,985	18,557	- 30.0	347,883	354,016	- 1.7	59,009	59,680	- 1.1	17.0	16.9
Getty Oil	3,000,878	3,472,840	- 13.6	172,445	216,266	- 20.3	12,311,612	13,251,560	- 7.1	690,712	855,902	- 19.3	5.6	6.5
Gulf Energy & Develop.	27,718	17,652	+ 57.0	1,308	2,981	- 56.1	91,110	60,132	+ 51.5	5,102	8,047	- 36.6	5.6	13.4
Gulf Oil Corp.	8,160,000	7,935,000	+ 2.8	226,000	301,000	- 24.9	30,658,000	30,461,000	+ 0.7	900,000	1,231,000	- 26.9	2.9	4.0
Holly Corp.[7]	104,255	129,794	- 19.7	5,445	5,398	+ 0.9	539,628	412,438	+ 28.7	10,516	5,672	+ 85.4	1.9	1.4
Inexco Oil	47,476	62,621	- 24.2	4,070	9,596	- 57.6	217,539	238,738	- 8.9	18,865	31,921	- 40.9	8.7	13.4
Louisiana L&E	331,302	342,791	- 3.3	23,173	18,533	+ 25.0	1,205,175	1,277,539	- 5.7	76,252	145,229	- 47.5	6.3	11.4
Mapco Inc.	540,701	581,242	- 7.0	19,695	31,114	- 36.7	1,992,947	2,179,034	- 8.5	73,822	96,890	- 23.8	3.7	4.4
Maynard Oil							33,307	43,799	- 23.9	(3,399)	4,520			10.3
Mesa Petroleum	103,295	99,399	+ 3.9	27,712	28,120	- 12.1	406,963	407,744	- 0.2	115,945	106,379	+ 9.0	28.5	26.1
Mitchell Energy[8]	255,785	285,666	- 10.5	22,446	35,280	- 36.4	961,713	1,064,844	- 9.7	80,303	115,217	- 30.3	8.4	10.8
Mobil Corp.	16,184,000	18,095,000	- 10.6	282,000	587,000	- 52.0	63,828,000	68,587,000	- 6.9	1,380,000	2,433,000	- 43.3	2.2	3.6
Murphy Oil	714,914	684,686	+ 4.4	40,141	38,458	+ 4.4	2,698,840	2,543,380	+ 6.1	159,093	163,006	- 2.4	5.9	6.4
Natomas	441,322	441,359		(8,367)	48,807		1,655,786	1,582,396	+ 4.6	44,000	232,527	- 81.1	2.7	14.7
Noble Affiliates	91,526	106,166	- 13.8	9,858	21,972	- 55.1	408,787	394,606	+ 3.6	70,261	80,281	- 12.5	17.2	20.6
Oxoco	12,402	12,723	- 2.5	2,139	2,768	- 22.7	39,226	28,340	+ 38.4	7,392	5,563	+ 32.9	18.8	19.6
Pacific Resources	395,270	314,559	+ 25.7	6,873	9,608	- 28.5	1,237,219	1,081,477	+ 14.4	9,798	17,106	- 42.7	0.8	1.6
Pennzoil Co.	529,144	652,982	- 19.0	50,486	54,778	- 7.8	2,268,511	2,681,751	- 15.4	188,713	221,642	- 14.9	8.3	8.3
Petro-Lewis	92,646	53,829	+ 72.1	7,931	4,312	+ 84.0	240,700[9]	180,000[9]	+ 33.7	17,200[9]	30,400[9]	- 43.4	7.1	7.9
Prairie Producing Co.	5,539	7,425	- 25.4	1,857	730	+154.4	25,570	30,061	- 14.9	5,259	6,758	- 22.2	20.6	22.5
Phillips Petroleum	4,062,727	4,091,181	- 0.7	154,593	186,526	- 17.1	15,891,612	16,287,753	- 2.4	645,856	879,364	- 26.6	4.1	5.4
Premier Resources[4]	2,963	3,518	- 15.8	(2,319)	(1,326)		13,185	12,061	+ 9.3	(1,691)	(345)			
Presidio Oil	3,486[9]	3,918[9]	- 10.9	255[9]	498[9]	- 48.8	1,727	1,924	- 10.2	105	183	- 42.6	6.1	9.5
Quaker State	210,144	229,177	- 8.3	7,216	6,747	- 7.0	928,933	918,913	+ 1.1	38,568	27,367	+ 41.0	4.2	3.0
Sabine Corp.	49,706	46,749	+ 6.3	3,017	5,628	- 46.3	197,422	172,670	+ 14.3	24,450	28,342	- 13.7	12.4	16.4
Shell Oil	5,176,000	5,193,000	- 0.3	438,000	458,000	- 4.4	20,214,000	21,739,000	- 7.0	1,605,000	1,701,000	- 5.6	7.9	7.8
Southland Royalty	83,374	99,054	- 15.8	4,884	8,895	- 45.1	357,925	400,139	- 10.5	28,659	36,216	- 20.9	8.0	9.1
Southwestern Energy	16,660	13,315	+ 25.1	4,675	2,991	+ 56.3	62,712	54,756	+ 14.5	13,020	12,533	+ 3.9	20.8	22.9
Standard Indiana	7,500,000	7,800,000	- 3.8	415,000	384,000	+ 8.1	29,900,000	31,700,000	- 5.7	1,826,000	1,922,000	- 5.0	6.1	6.1
Standard Ohio	3,216,700	3,773,300	- 14.7	463,900	477,800	- 2.9	13,529,200	14,140,200	- 4.3	1,879,100	1,946,900	- 3.5	13.9	13.8
Statex Petroleum[8]	3,003	3,368	- 10.8	(72)	581									17.3
Sun Co.	4,100,000	4,500,000	- 8.9	151,000	448,000	- 66.3	16,300,000	16,400,000	- 0.6	537,000	1,076,000	- 50.1	3.3	6.6
Superior Oil	504,100	560,500	- 10.1	24,000	73,200	- 67.2	2,040,500	2,057,400	- 0.8	223,400	361,300	- 38.2	10.9	17.6
Tenneco	3,978,100	4,312,200	- 7.8	288,000	260,000	+ 10.8	15,396,300	15,383,100	+ 0.1	819,000	813,000	+ 0.7	4.9	4.9
Tesoro[4]	604,368	652,750	- 7.4	9,627	19,376	- 50.3	2,439,853	3,034,768	- 19.6	42,518	73,583	- 42.2	1.7	2.4
Texaco Inc.	11,700,000	14,600,000	- 19.9	306,000	507,000	- 39.6	48,000,000	59,300,000	- 19.1	1,281,000	2,310,000	- 44.5	2.7	3.9
Tomlinson Oil[3]	24,447	27,100	- 9.8	(216)	(865)									
Tosco Corp.	913,745	901,492	+ 1.4	3,054	30,095	- 90.0	3,465,964	3,431,491	+ 1.0	132,312	22,579	+486.4	3.8	0.7
Total Petroleum N.A.	583,772	654,938	- 10.9	5,248	(14,667)		2,233,056	2,380,538	- 6.2	12,752	(63,608)		0.6	
Union Oil of California	2,736,100	2,911,400	- 6.0	225,100	236,000	- 4.6	10,899,100	11,296,200	- 3.5	804,000	791,400	+ 1.6	7.4	7.0
Universal Resources	12,599	17,282	- 27.0	(115)	3,679		58,117	63,707	- 8.8	6,609	13,601	- 51.4	11.4	21.4
Woods Petroleum	22,088	22,900	- 3.5	6,483	8,632	- 24.9	83,048	71,969	+ 15.4	23,018	21,897	+ 5.1	27.7	30.4
Worldwide Energy	17,367	16,338	+ 6.0	1,262	568	+122.2	58,777	54,474	+ 7.9	857	(574)		1.5	
TOTAL	117,073,267	128,231,763	- 8.7	5,486,525	6,846,218	- 19.9	461,869,469	499,649,530	- 7.6	20,474,523	25,522,789	- 19.8	4.4	5.1

**Excluding non-recurring items. *Earnings available to common stock. ( ) Loss. [1]Ends March 31. [2]Nine months. [3]Ends Nov. 30. [4]Ends Sept. 30. [6]Ends Aug. 31. [7]Ends July 31. [8]Ends Jan. 31. [9]Six months.

higher oil prices and tax credits in Canada.

Callon Petroleum's fourth quarter earnings fell 77.1%, from $327,000 to $75,000. Net income for 1982 dropped to $1.4 million from $1.6 million in 1981, a 14.4% decline.

While gas processing, refining and marketing-terminalling operations improved, contract drilling and industrial equipment sales posted substantial losses at Dorchester Gas, resulting in a 43.1% drop in earnings for 1982. Net income for the quarter however, increased 3%.

Enstar's 1982 net income increased slightly to $42.1 million, compared with 1981 earnings of $41.6 million due to decreased interest expense and a lower after-tax charge for the redemption fund of the Virginia International Company Special Stock. Fourth quarter earnings increased 26.3%.

Lower level of dry hole expense improved fourth quarter results considerably at Equity Oil where net income increased 5.6%. For the year, however, earnings dropped 41.3%, from $5.57 million in 1981 to $3.26 million in 1982.

Felmont Oil reported earnings of $3 million for the fourth quarter 1982 compared to $4.35 million in 1981, a 31% drop-off. Net income for the year fell 16.2%, from $16.7 million to $14 million.

Hampered by customer gas curtailment, soft liquid prices, and higher feedstock costs, Gulf Energy & Development's earnings dropped 56.1% for the quarter and 36.6% for the year.

The worldwide slowdown in economic activity adversely affected Louisiana Land and Exploration's earnings for 1982 which dropped 47.5%. Lower oil, copper, and refined product prices as well as decreased demand for copper and natural gas contributed significantly to the decline. Net income for the quarter increased 25% due to a lower effective tax rate, improved real estate sales, and a reduction in overhead and petro-

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GAS COMPANIES' FOURTH QUARTER FINANCIAL REPORTS

	Three months ending December 31**						Twelve months ending December 31**						Profit Margin	
	Revenues ($000)			Earnings* ($000)			Revenues ($000)			Earnings* ($000)				
Company	1982	1981	% Chg.	1982	1981	% Chg.	1982	1981	% Chg.	1982	1981	% Chg.	1982	1981
Alabama Tennessee N.G.	36,277	30,263	+ 20.0	1,542	1,651	- 6.6	132,872	116,805	+ 13.8	5,858	5,786	+ 1.2	4.4	5.0
ARKLA	316,247	282,333	+ 12.0	10,166	8,386	+ 21.2	1,296,584	1,179,139	+ 1.0	95,380	87,560	+ 8.9	7.4	7.4
Coastal Corp.	1,582,419	1,314,797	+ 20.4	22,582	1,929	+1070.7	5,818,797	5,925,476	- 1.8	65,630	(20,399)		1.1	
Columbia Gas	1,407,690	1,351,070	+ 4.2	64,357	74,357	- 13.0	5,070,591	4,426,243	+ 14.6	180,063	194,085	- 7.2	3.6	4.4
Consolidated N.G.	883,670	810,597	+ 9.0	37,312	37,942	- 1.7	3,210,985	2,738,164	+ 17.3	155,420	131,656	+ 18.1	4.8	4.8
El Paso Companies	1,188,990	1,127,620	+ 5.4	(12,926)	39,409		4,364,042	3,909,023	+ 11.6	53,236	147,257	- 63.8	1.2	3.8
ENSERCH Corp.	913,433	852,953	+ 7.1	25,747	46,140	- 44.2	3,787,675	3,362,474	+ 12.6	157,353	196,959	- 20.1	4.2	5.8
InterNorth	1,188,406	1,029,812	+ 15.4	30,799	60,937	- 49.5	4,158,986	3,641,567	+ 14.2	181,275	253,512	- 28.5	4.4	7.0
Kansas-Nebraska N.G.	135,086	133,311	+ 1.3	8,516	6,911	+ 23.2	488,319	451,037	+ 8.3	26,452	25,574	+ 3.4	5.4	5.7
National Fuel Gas	276,932	267,766	+ 3.4	6,777	12,308	- 44.9	1,006,714	912,438	+ 10.3	27,048	27,846	- 2.9	2.7	3.1
Northwest Energy	599,514	452,847	+ 32.4	29,130	18,008	+ 61.8	1,601,832	1,377,259	+ 16.3	60,238	68,107	- 11.6	3.8	4.9
NOVA, An Alberta Corp.	1,054,973	798,675	+ 32.1	32,473	20,378	+ 59.4	3,501,798	2,669,551	+ 31.2	91,181	97,028	- 6.0	2.6	3.6
ONEOK Inc.	255,422	274,518	- 7.0	8,113	12,317	- 34.1	1,088,620	1,109,843	- 1.9	49,988	59,078	- 15.4	4.6	5.3
Pacific Lighting	1,196,123	1,006,128	+ 18.9	39,208	18,897	+107.5	4,404,395	3,401,489	+ 29.5	122,946	117,225	+ 4.9	2.8	3.4
Panhandle Eastern	880,075	803,229	+ 9.6	35,368	48,664	- 27.3	3,391,465	3,266,253	+ 3.8	219,876	216,604	- 16.0	6.5	8.0
Peoples Energy	335,971	367,077	+ 8.7	4,548	11,119	- 59.0	1,511,384	1,395,243	+ 8.3	39,381	50,228	- 21.6	2.6	3.6
Pioneer Corp.	252,579	317,516	- 20.5	18,688	25,206	- 25.9	1,118,736	1,224,645	- 8.6	91,244	110,204	- 17.2	8.2	9.0
Sonat Inc.	747,598	728,047	+ 2.7	43,999	44,643	- 1.4	2,737,696	2,629,003	+ 4.1	204,639	173,672	+ 17.8	7.5	6.6
Texas Eastern Corp.	1,502,728	1,242,618	+ 20.9	13,382	60,124	- 77.7	5,654,353	4,526,114	+ 24.9	161,334	220,634	- 26.9	2.9	4.9
Texas Gas Transmission	770,205	764,851	+ 0.7	27,399	25,981	+ 5.5	2,877,590	2,649,265	+ 8.6	111,268	128,684	- 13.5	3.9	4.9
TransCanada PipeLines	899,727	925,455	- 2.8	50,905	42,592	+ 19.5	3,466,915	3,404,897	+ 1.8	161,128	125,573	+ 28.3	4.6	3.7
Transco Energy Co.	1,060,900	897,201	+ 18.2	20,899	41,286	- 49.4	3,869,329	3,475,667	+ 11.3	129,202	132,343	- 2.4	3.3	3.8
Union Gas Ltd.	301,586	280,686	+ 7.4	9,536	10,208	- 6.6	705,525[1]	621,537[1]	+ 13.5	13,669[1]	12,116[1]	+ 12.8	1.9	1.9
United Energy Res.	1,316,100	1,505,300	- 12.6	33,300	56,800	- 41.4	5,561,800	5,431,000	+ 2.4	192,400	215,700	- 10.8	3.5	4.0
Westcoast Transmission	362,114	363,904	- 0.5	14,998	19,065	- 21.3	1,153,440	1,270,330	- 9.2	70,047	65,426	+ 7.1	6.1	5.2
TOTAL	19,464,765	17,928,574	+ 8.6	576,818	734,651	- 21.5	71,980,443	65,114,462	+ 10.5	2,666,226	2,887,458	- 7.7	3.7	4.4

** Excluding non-recurring items. *Earnings available to common stock. [1]Nine months. ( ) Loss.

leum operating costs.

Natomas posted an 81.1% drop in net income for 1982. Higher interest expenses and declines from Natomas' international and domestic petroleum operations are blamed. For the quarter, the company reported an $8.4 million loss.

The depressed contract drilling market as well as a decline in oil and gas operating income caused by foreign exchange losses, high dry hole expenses, and weak natural gas demand resulted in a 55.1% decline in fourth quarter earnings for Noble Affiliates. Net income for 1982 fell 12.5%.

Oxoco's 1982 earnings increased 32.9% due primarily to higher profitability on oil and gas activities. For the quarter, net income fell 22.7%.

Sharply reduced natural gas sales, losses in the metals division, and a decrease in sulphur sales combined in 1982 for a 14.9% drop in earnings at Pennzoil for the year and a 7.8% decrease for the quarter.

Superior Oil reported a 67.2% decrease in net income in the fourth quarter and a 38.2% drop in 1982. In addition to the impact of the recession on oil and gas prices, the company experienced larger lease impairments, higher exploration and dry hole costs, and absorbed substantial losses of its mining affiliates.

In spite of a harsh recessionary economy, Tenneco posted record net income for both the year and the fourth quarter. In 1982, earnings increased from $813 million to $819 million. For the quarter, net income increased 11.8%.

Continuing depressed domestic drilling activity, reduced production levels of foreign crude oil and natural gas, and reduced domestic crude oil prices are blamed for Tesoro Petroleum's 50.3% decline in fourth quarter earnings and a 42.2% drop-off for the year.

Fourth quarter earnings at Tosco Corp. were down 90%, while net income for the year increased 486%. Even though the year was highly profitable, toward the end of 1982 a costly and destructive war to increase market position by the majors reduced gasoline prices, sometimes below the cost of crude oil, the company noted.

Lower demand for natural gas and related services contributed to a 21.5% decline in fourth quarter earnings for the 25 gas companies in our survey group. Profit margin fell from 4.4% to 3.7%.

The El Paso Company's gain in earnings from exploration and production activities, sales of natural gas liquids, and the sale of an interest in certain insurance assets was more than offset by the adverse effect of a reduction in gas market demand, reduced revenues and volumes on the sales of chemical products and higher interest expense. The company reported a loss for the quarter and a 63.8% decline in earnings for the year.

Peoples Energy's fourth quarter earnings dropped 59% due to reduced gas sales resulting from the sluggish economy, substantially warmer weather, and the loss of large-volume commercial and industrial sales to low-sulphur No. 6 oil, along with higher operating costs. For the year, net incomes declined 21.6%.

The downturn in the petroleum industry is blamed for ONEOK's 34.1% drop-off in earnings for the quarter and 15.4% decline for the year.

A decline in earnings from Pacific Lighting's utility sector was made up by a substantial increase in earnings from their federally regulated gas pipeline operations, and oil and gas exploration and production activities. Fourth quarter earnings were up 107%, while net income for the year increased 4.9%.

TransCanada PipeLines' earnings increased from $42.5 million in the previous quarter to $50.9 million in the fourth quarter. For 1982, net income was up 28.3%.

United Energy Resources' 1982 operations were adversely affected by the recession in the energy sector, resulting in a 41.4% decline in fourth quarter earnings and a 10.8% drop-off for the year. ■

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OFFSHORE TECHNOLOGY

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ABOUT THE COVER: Dual Offshore Rig 38 is shown being towed from Okpo, Korea, to the Java Sea, where it is scheduled to drill for Arco Indonesia. (Photo courtesy of Dual Drilling Co.)

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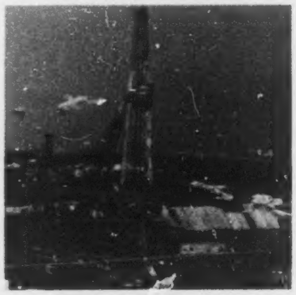
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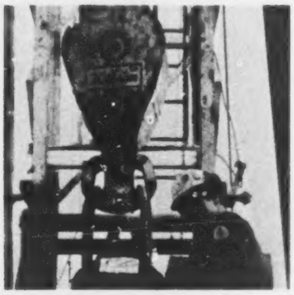
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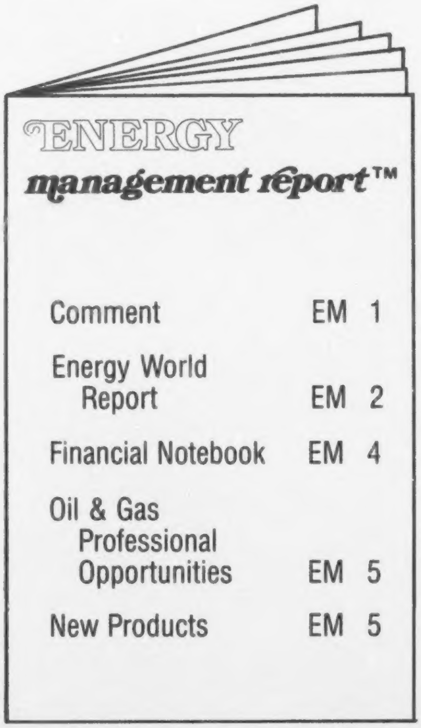

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Engineering Profits into Energy Operations

Canadian Rig Count Drops 67% In Month

The U.S. rotary rig count declined by 166 active rigs during the mid-March to mid-April period this year, which represents a loss of 8.3%. Canada, meanwhile, was down 153 rigs during the same period, and that is a decline of 67%.

Canadian offshore activity, however, appears to be holding its own, with some observers predicting that country's offshore expenditures this year to total about $1.1 billion. And they look for them to rise to $1.4 billion in 1984.

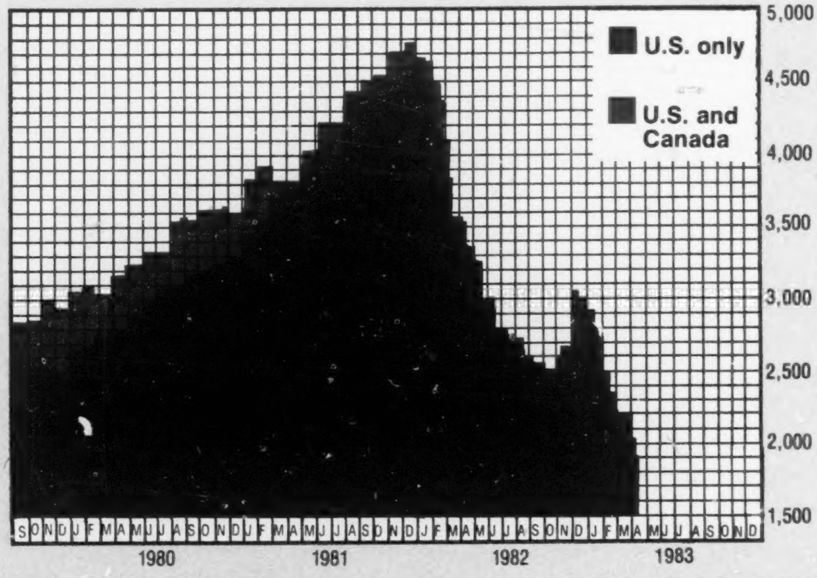
Last year, nine rigs were active offshore Canada's east coast (seven semisubmersibles and two jackups). Six of them operated off Nova Scotia and three were in Newfoundland waters. In addition, three drillships operated offshore Labrador, and one was active in the Davis Strait. Total expenditures offshore eastern Canada last year came to approximately $630 million.

Rotary Rigs Actually Making Hole in United States & Canada

As Reported To International Association Of Drilling Contractors By Hughes Tool Co.

	Mar. 21, 1963	Mar. 28, 1983	Apr. 4, 1983	Apr. 11, 1983
Alabama				
Land	16	13	14	13
Inland Waters	4	4	4	4
Alaska				
Land	14	14	13	12
Offshore	3	2	3	3
Total	17	16	16	15
Arkansas	23	20	25	30
Arizona	1	1	0	1
California				
Land	67	66	62	65
Offshore	21	21	20	24
Total	88	87	82	89
Colorado	47	37	41	39
Florida	4	3	4	4
Hawaii	1	1	1	1
Idaho	1	1	0	0
Illinois	37	39	40	33
Indiana	1	3	4	4
Kansas	115	114	38	60
Kentucky	7	9	9	9
North Louisiana	26	24	26	21
South Louisiana				
Inland Waters	45	45	45	47
Land	94	88	77	70
Offshore	143	140	138	139
Total	308	297	286	277
Michigan	9	12	18	13
Minnesota	1	1	0	0
Mississippi	32	37	37	37
Montana	19	17	13	12
Nebraska	10	12	11	12
New Mexico	48	49	54	59

	Mar. 21, 1983	Mar. 28, 1983	Apr. 4, 1983	Apr. 11, 1983
New York	6	5	3	3
North Dakota	28	24	22	21
Ohio	18	20	18	17
Oklahoma	293	292	267	250
Oregon	1	0	0	0
Pennsylvania	11	11	10	10
South Dakota	0	0	0	1
Tennessee	0	0	1	0
Texas				
Offshore	46	47	45	48
Inland Waters	7	8	9	9
Dist. 1-S. Central Tex.	18	18	22	23
Dist. 2-Middle Tex. Coast	23	34	30	32
Dist. 3-Upper Tex. Coast	93	86	86	80
Dist. 4-Lower Tex. Coast	74	72	69	63
Dist. 5-Northeast Tex.	24	25	24	24
Dist. 6-Far Northeast Tex.	79	77	74	73
Dist. 7B-N. Central Tex.	57	53	50	54
Dist. 7C-W. Central Tex.	49	49	44	45
Dist. 8-Far West Tex.	96	95	93	96
Dist. 8A-West Tex.	57	50	48	51
Dist. 9-North Tex.	61	58	60	67
Dist. 10-Tex. Panhandle	43	38	38	39
Total	726	710	692	704
Utah	26	33	33	27
Virginia	2	2	2	2
Washington	1	1	1	1
West Virginia	27	22	17	18
Wyoming	72	63	64	68
Total U.S.	2,000	1,956	1,882	1,834
Canada	227	163	101	74
Canada-Offshore	5	6	6	8
U.S. and Canada	2,232	2.125	1,989	1,916



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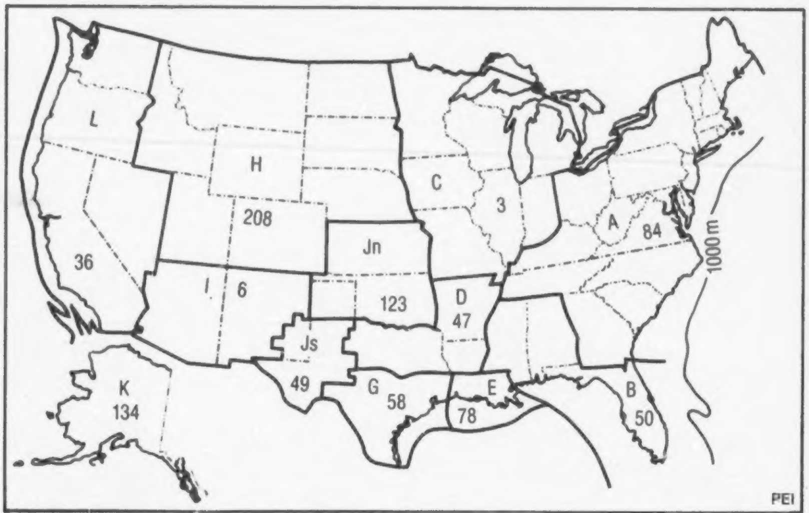
Drilling Activity Reinforces Gas Committee's Optimism

The undiscovered natural gas resource potential of the U.S. provides a foundation for meeting the nation's natural gas energy needs well into the 21st century, according to the Potential Gas Committee.

Results of accelerated drilling activity in the U.S. through 1981 and high rates of successful well completions through 1982, in addition to the previously accumulated knowledge about the nation's gas resource, have led the committee to estimate the total potential remaining gas to be discovered to be approximately 876 tcf. This is a decrease of 37 tcf from the year-end 1980 estimate.

J.C. Herrington, chairman of the Potential Gas Committee, points out that the decrease is approximately equal to the gas discovered over the past 2 years. This means that there has been no significant new information developed during the past 2 years that would have caused the committee to alter its previous concept of the potential supply. In a speech before the 10th Energy Technology Conference recently in Washington, D.C., Harrington pointed out some paradoxes in the current potential supply picture, but he stressed that results of exploration and drilling activity during the past 2 years have basically reinforced the committee's position that more than one-half of the resource originally existing in the country still remains to be found, and more than 60% remains to be produced. He said also that consumers can be assured of the existence of adequate supplies of recoverable natural gas to meet demand for the foreseeable future. In fact, he added, the industry currently has productive capacity in excess of market demands.

The national total estimate, however, is a combination of regional estimates, which have individually been increased or decreased since the committee's 1980 evaluation. Frontier areas, such as Alaska and portions of the Rocky Mountain states, tend to have major changes because exploratory plays there are in the early stages of development. The committee's estimate for the Rocky Mountain states has been increased largely because of inclusion of quantities of low-heat-content gas in western Wyoming. Additional potential also is believed to exist in some areas in central Wyoming where sedimentary rocks now are known to occur beneath major thrust faults.



Reporting areas and total potential gas supply, as seen by the Potential Gas Committee as of the end of 1982.

The committee now believes that the low-heat-content gas can be commercially developed, and that the subthrust sediments provide additional targets for exploration. Increases in the Rockies partly offset decreases in estimates for other areas.

The estimate of potential for the Mid-Continent area, particularly Oklahoma, was decreased due to transfers from potential resources to proved reserves and to better evaluation of the potential made possible by recently high levels of drilling activity. This activity confirmed some estimates, but there have been disappointments also in some areas, such as the deep Pennsylvanian Springer sands in the southeastern part of the Anadarko Basin.

The estimate for California, Oregon, Washington, and Nevada has been reduced primarily because of a reevaluation of the potential for the San Joaquin basin, plus transfers to proved reserves. Recent seismic work and wild-

TABLE 1. Estimated potential supply of natural gas (trillions of cubic feet at 14.73 psia and 60 F)

	Probable	Possible	Speculative
Lower 48 states			
Onshore	151	263	179
Offshore	33	63	53
Alaska			
Onshore	6	16	28
Offshore	2	13	69
Total U.S.	**192**	**355**	**329**

TABLE 2. Estimated potential supply of natural gas in the U.S. by geographic areas, as of Dec. 31, 1982. (Trillions of cubic feet at 14.73 psia and 60F)

Area		Probable	Possible	Speculative
A	Onshore	27	8	33
	Offshore	—*	—	16
B	Onshore	6	6	7
	Offshore	1	2	28
C	Onshore	—	2	1
D	Onshore	8	20	19
E	Onshore	6	15	—
	Offshore	21	36	—
G	Onshore	12	15	4
	Offshore	11	16	—
H	Onshore	49	93	66
I	Onshore	2	3	1
J-North	Onshore	24	60	39
J-South	Onshore	15	33	1
L	Onshore	2	8	8
	Offshore	—	9	9
48 states	subtotal	184	326	232
K Alaska	Onshore	6	16	28
	Offshore	2	13	69
	Total U.S.	**192**	**355**	**329**

*Dashes are used to represent estimates of potential of less than 0.5 tcf.

cat drilling have diminished what had been considered to be prospective acreage in Alaska – portions of the arctic basin, for example, the Gulf of Alaska, Lower Cook Inlet, and the Kodiak area.

Estimates for other areas of the country show no significant changes other than those expected by normal developments. These include the relatively mature exploration and production areas of Texas and Louisiana, which have shown consistent declines in estimates of future gas potential as their gas resources have been developed and produced.

With the coming of age of improved completion technology for tight formations, and a price incentive granted by regulatory agencies, this formerly unconventional gas resource is rapidly increasing in importance as a conventional resource. In fact, a review of all areas where the Potential Gas Committee now estimates conventional natural gas potential indicates that as much as 20% (172 tcf) of this so-called tight gas resource may be included in the current estimate.

Copies of the committee's complete report, Potential Supply of Natural Gas in the United States, as of Dec. 31, 1982, are to be released next month. It can be ordered from the Potential Gas Agency, Colorado School of Mines, Golden, Colo. 80401.

Mideast Drilling Up As Free World Slumps

Free World drilling activity declined by 35 rigs during the first 2 months of 1983, and stood at 1,381 active rotary rigs as of February, according to Hughes Tool Co.'s International Rotary Drilling Rig Report.

The decline in activity since the previous February (in 1982) was 85 rigs.

Only the Middle East failed to take part in the slump. That region, in fact, gained 56 rigs during the year. Some 34 of them are accounted for by the return to the charts in a big way by Iran and Iraq, but even if rigs from those two countries are not counted, the Middle East still registered a 17-rig gain. All other regions of the Free World (not counting the U.S. and Canada) registered losses.

International Rotary Rig Report, prepared by Hughes Tool Co.

(Figures in parentheses indicate how many of each country's rigs are offshore rigs.)

	Feb. 1982	Jan. 1983	Feb. 1983
Africa			
Algeria	68	80	80
Angola	8(6)	13(9)	13(9)
Benin	0	1(1)	1(1)
Cameroun	6(6)	7(6)	7(6)
Chad	1	1	0
Gabon	15(11)	10(8)	9(8)
Guinea	0	1(1)	0
Ivory Coast	6(6)	5(5)	3(3)
Libya	33(2)	23(2)	23(2)
Morocco	6(1)	5	5
Niger	5	1	1
Nigeria	28(9)	21(11)	19(10)
Congo	7(5)	5(4)	0
Zaire	3(1)	2(1)	2(1)
Senegal	0	1	0
Sierra Leone	0	1(1)	0
South Africa	2(2)	2(2)	2(2)
Sudan	2	3	3
Tunisia	11(3)	11(3)	11(3)
	210(52)	193(54)	179(45)
Latin America			
Argentina	68(3)	62(1)	63(1)
Barbados	1	1	1
Bolivia	13	7	7
Brazil	91(29)	100(34)	99(35)
Chile	7(3)	6(3)	6(3)
Colombia	23	22(1)	19
Costa Rica	0	1	1
Dominican Rep.	1	0	0
Ecuador	5(1)	5(1)	4
Guatemala	7	3	3
Mexico	215(19)	187(22)	187(22)
Paraguay	1	0	0
Peru	25(5)	18(5)	13(5)
Trinidad	15(7)	11(5)	12(5)
Uruguay	1	0	0
Venezuela	66(16)	63(18)	61(18)
	539(83)	486(90)	476(89)
Far East			
Bangladesh	7	2	1
Brunei	10(7)	13(9)	12(8)
Burma	31	34(1)	41(1)
India	49(8)	54(12)	54(12)
Indonesia	94(30)	90(33)	86(30)
Japan	21(6)	19(2)	19(2)
Malaysia	14(14)	11(11)	9(9)
Pakistan	16	18	18
Philippines	17(3)	10(1)	9
Taiwan	4	0	0
Thailand	9(6)	9(4)	10(5)
	272(74)	260(73)	259(67)
Europe			
Austria	10	11	9
Denmark	2(2)	2(2)	2(2)
France	30(2)	13	22
Germany	30	33	31
Greece	6(3)	4(2)	4(2)
Holland	18(9)	16(12)	16(11)
Italy	33(8)	37(7)	37(7)
Norway	12(12)	11(11)	10(10)
Portugal	1	1	1
Spain	13(6)	10(4)	9(5)
Switzerland	1	1	1
United Kingdom	63(59)	56(53)	44(41)
Yugoslavia	22	25	25
	241(101)	220(91)	211(78)
Middle East			
Abu Dhabi	38(19)	44(27)	44(27)
Bahrain	1	1	1(1)
Dubai	3(2)	4(2)	4(2)
Egypt	30(19)	40(22)	40(22)
Iran	0	11(2)	11(2)
Iraq	5	28	28
Kuwait	3	5	5
Oman	11	12(2)	12(2)
Qatar	6(3)	4(2)	4(2)
Ras al Khaimah	1	2(1)	2(1)
Saudi Arabia	29(13)	28(12)	28(12)
Sharjah	3(1)	1	1
Syria	16	15	15
Turkey	26	33	33
Umm al Qaiwain	1	1	1
	173(57)	229(70)	229(71)
South Pacific			
Australia	38(9)	26(11)	24(11)
New Zealand	2(1)	1	2
Papua New Guinea	0	1(1)	1(1)
	40(10)	28(12)	27(12)
Totals	**1,466 (377)**	**1,416 (390)**	**1,381 (362)**

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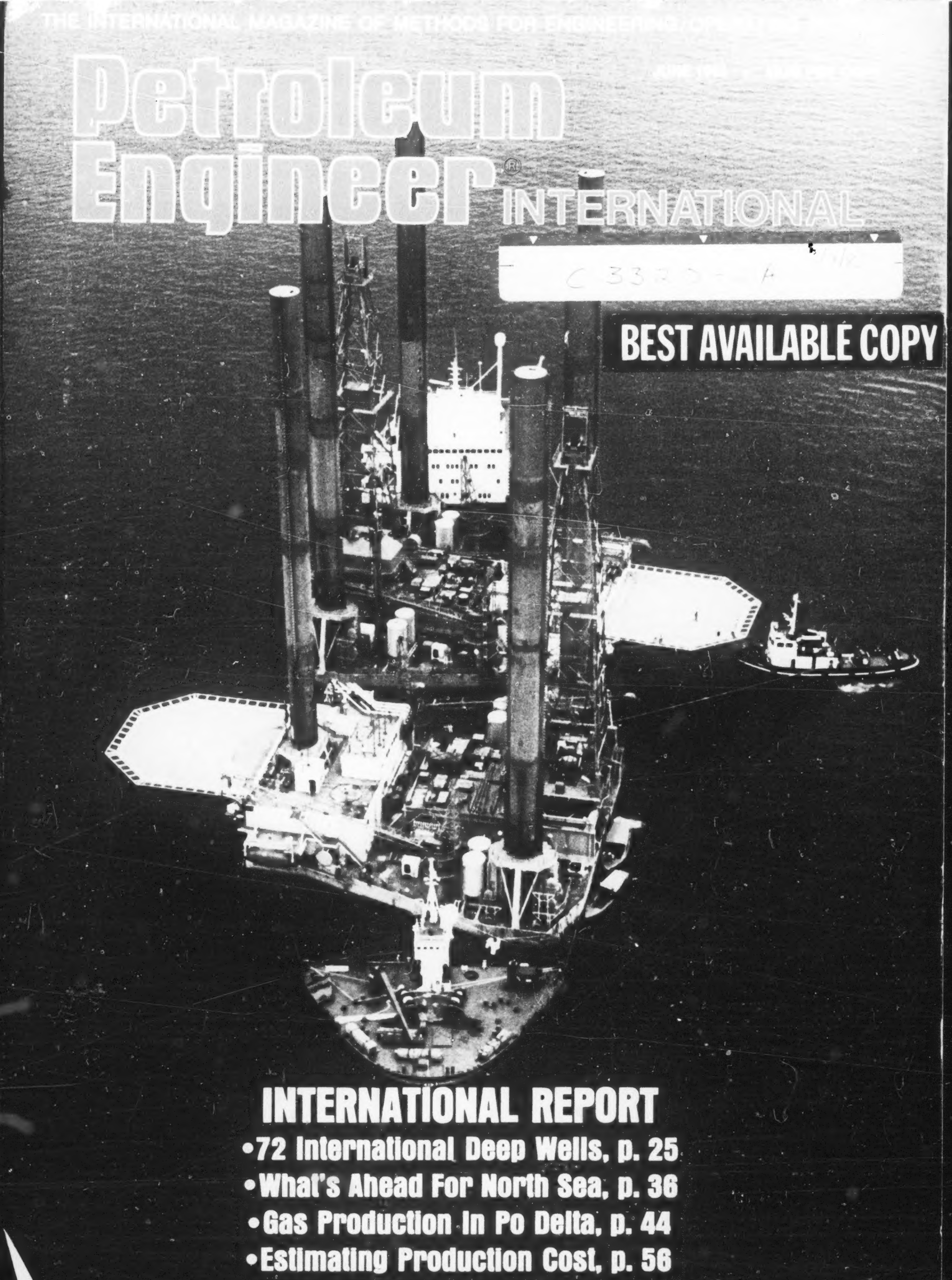

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ABOUT THE COVER: The jack-up rigs Ocean Masters V and VI are shown being loaded aboard the cargo ship Dyvi Swan in Brazil's Sao Sebastia harbor prior to dry shipment to Saudi Arabia. (Photo courtesy of Loffland Brothers Co.)

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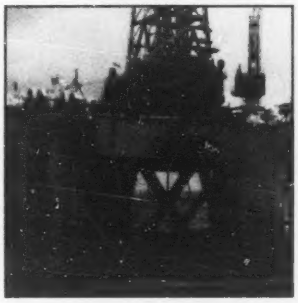

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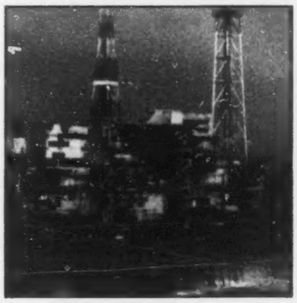

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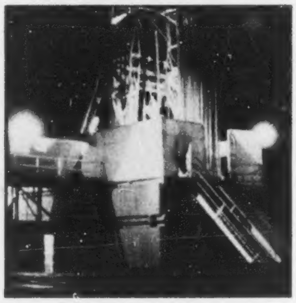

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by G. C. Borgia, G. Brighenti, and D. Vitali, University of Bologna. The time is right to start exploitation of these reserves again to determine if further production would be economically and environmentally attractive.

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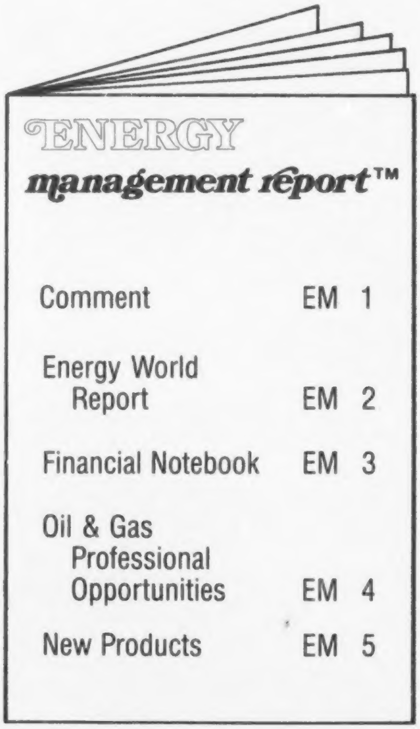

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Drillers See Light At End Of Tunnel

The long-awaited turnaround in U.S. rotary rig activity seems to have arrived on schedule, if events of late April and early May are any indication. During that time, the count increased at an average rate of 47 rigs per week after having declined at a rate of almost 60 rigs per week during the first quarter of 1983.

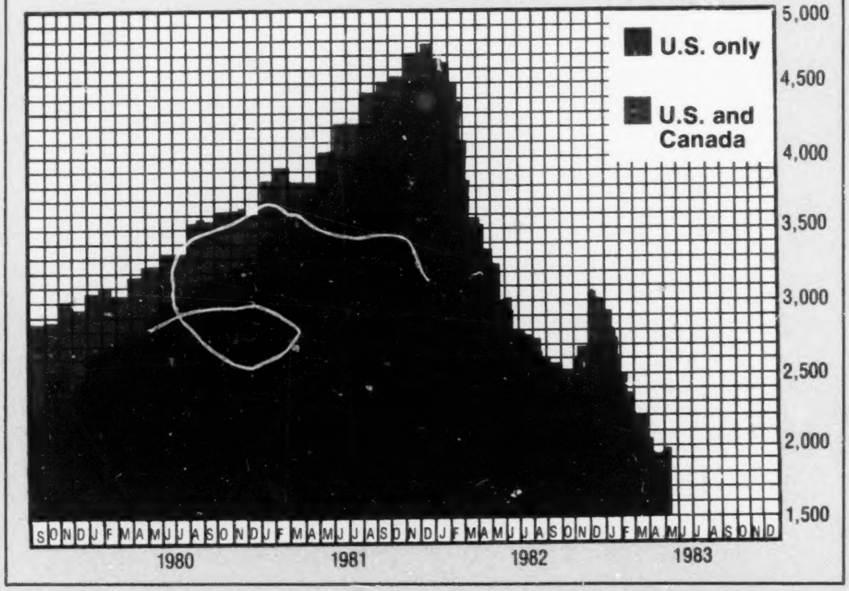
As of mid-May, the average U.S. rig count for the year stood at 2,165. The high point came on January 3, when the count stood at 2,756. Low point came 15 weeks later, on April 18, when 1,807 rotaries were turning. Since then, 141 rigs have been added to the U.S. count.

It is too early to tell whether Canada will join in the turnaround because the rig count north of the border traditionally reaches its nadir in mid-May. The 43 rigs counted in Canada on May 9 this year, however, represent the lowest rig count in that country since May 19, 1975, when the count was also 43.

Rotary rigs actually making hole in United States & Canada

As Reported To International Association Of Drilling Contractors By Hughes Tool Co.

	April 18, 1983	April 25, 1983	May 2, 1983	May 9, 1983
Alabama				
Land	9	9	12	13
Inland Waters	4	2	2	3
Offshore	0	1	1	1
Total	13	12	15	16
Alaska				
Land	12	10	10	10
Offshore	3	4	5	6
Total	15	14	15	16
Arkansas	29	23	21	20
Arizona	1	1	1	0
California				
Land	65	66	72	71
Offshore	23	25	25	20
Total	88	91	97	91
Colorado	35	39	33	36
Florida	5	6	6	5
Hawaii	1	1	1	1
Idaho	0	0	0	1
Illinois	28	29	60	54
Indiana	4	5	4	5
Kansas	54	100	111	120
Kentucky	8	5	8	9
North Louisiana	19	22	23	29
South Louisiana				
Inland Waters	50	45	45	40
Land	68	75	66	61
Offshore	137	136	130	123
Total	274	278	264	253
Michigan	11	11	14	22
Mississippi	33	27	27	26
Montana	14	13	13	13
Nebraska	12	12	12	12
Nevada	0	1	1	1
New Mexico	64	63	64	61
New York	3	6	9	5
North Dakota	23	22	25	26
Ohio	21	18	26	25
Oklahoma	239	232	268	294
Pennsylvania	9	9	9	8
South Dakota	1	1	0	0
Texas				
Offshore	50	53	56	52
Inland Waters	9	9	8	8
Dist. 1-S. Central Tex.	22	21	22	20
Dist. 2-Middle Tex. Coast	35	33	23	24
Dist. 3-Upper Tex. Coast	85	93	87	92
Dist. 4-Lower Tex. Coast	66	60	55	52
Dist. 5-Northeast Tex.	26	21	21	24
Dist. 6-Far Northeast Tex.	69	75	71	77
Dist. 7B-N. Central Tex.	61	55	60	66
Dist. 7C-W. Central Tex.	45	48	46	49
Dist. 8-Far West Tex.	91	96	84	83
Dist. 8A-West Tex.	50	50	50	55
Dist. 9-North Tex.	62	69	62	56
Dist. 10-Tex. Panhandle	38	45	44	45
Total	709	728	689	703
Utah	25	25	26	32
Virginia	2	1	1	1
Washington	1	1	1	1
West Virginia	16	19	24	24
Wyoming	69	67	68	66
Total U.S.	1,807	1,860	1,913	1,948
Canada	59	45	47	38
Canada-Offshore	9	9	9	5
U.S. and Canada	1,875	1,914	1,969	1,991



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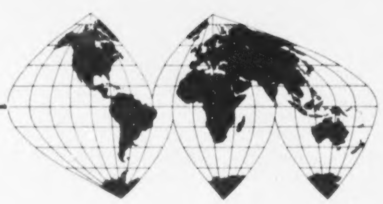
International Report



Free World drilling activity declined by 125 rigs during the first quarter of 1983, according to Hughes Tool Co. figures which indicate that 39 of the idle rigs are offshore rigs.

At the end of 1982, the International Rotary Drilling Rig Report counted 1,447 active rigs in the Free World (not counting the U.S. and Canada). Some 387 of them were offshore rigs. The count for March 1983 is 1,322 active rotaries, of which 348 are offshore.

The activity declines seem to be pretty much across the board, with no country or region standing out. The full tally follows:

International Rotary Rig Report, prepared by Hughes Tool Co.

(Figures in parentheses indicate how many of each country's rigs are offshore rigs.)

	March 1982	Feb. 1983	March 1983
Far East			
Bangladesh	3	1	1
Brunei	12(8)	12(8)	10(7)
Burma	31	41(1)	41(1)
India	41(7)	54(12)	54(12)
Indonesia	94(31)	86(30)	87(23)
Japan	24(6)	19(2)	18(2)
Malaysia	14(14)	9(9)	9(9)
Pakistan	16	18	17
Philippines	18(4)	9	9
Taiwan	4(1)	0	0
Thailand	9(6)	10(5)	11(6)
	272(77)	259(67)	257(60)
South Pacific			
Australia	32(9)	24(11)	24(12)
New Zealand	1	2	2
Papua New Guinea	1	1(1)	1(1)
	34(9)	27(12)	27(13)
Europe			
Austria	10	9	9
Denmark	2(2)	2(2)	5(4)
France	28(2)	22	15(1)
Germany	30	31	30
Greece	6(3)	4(2)	3(1)
Holland	18(9)	16(11)	16(11)
Italy	33(8)	37(7)	33(7)
Norway	15(15)	10(10)	10(10)
Portugal	1	1	1
Spain	14(7)	9(5)	9(5)
Switzerland	1	1	1
United Kingdom	64(60)	44(41)	39(38)
Yugoslavia	22	25	25
	244(106)	211(78)	196(77)
Middle East			
Abu Dhabi	38(19)	44(27)	40(26)
Bahrain	1	1	1
Dubai	3(2)	4(2)	5(3)
Egypt	32(22)	40(22)	35(21)
Iran	0	11(2)	2
Iraq	5	28	22
Jordan	0	0	3
Kuwait	3	5	5
Oman	11	12(2)	10
Qatar	6(3)	4(2)	2(2)
Ras al Khaimah	1	2(1)	1
Saudi Arabia	31(17)	28(12)	25(12)
Sharjah	3(1)	1	0
Syria	16	15	15
Turkey	26	33	31
Umm al Qaiwain	1	1	1
	177(64)	229(71)	198(64)
Africa			
Algeria	68	80	80
Angola	8(6)	13(9)	13(9)
Benin	0	1(1)	1(1)
Cameroun	6(6)	7(6)	6(6)
Chad	1	0	0
Gabon	15(11)	9(8)	9(8)
Ivory Coast	6(6)	3(3)	2(2)
Libya	33(2)	23(2)	23(2)
Morocco	6(1)	5	5
Niger	5	1	1
Nigeria	28(9)	19(10)	19(10)
Rep. of Congo	7(5)	0	5(5)
Rep. of Zaire	3(1)	2(1)	2(1)
South Africa	2(2)	2(2)	2(2)
Sudan	2	3	5(1)
Tunisia	11(3)	11(3)	11(3)
	201(52)	179(45)	184(50)
Latin America			
Argentina	73(3)	63(1)	63(1)
Barbados	1	1	1
Bolivia	13	7	6
Brazil	93(30)	99(35)	98(34)
Chile	7(3)	6(3)	6(3)
Colombia	23	19	18
Costa Rica	0	1	1
Dominican Rep.	1	0	0
Ecuador	5(1)	4	5
Guatemala	6	3	3
Mexico	211(20)	187(22)	187(22)
Paraguay	1	0	0
Peru	26(5)	13(5)	15(6)
Trinidad	13(6)	12(5)	11(4)
Venezuela	68(17)	61(18)	46(14)
	541(85)	476(89)	460(84)
Totals	**1,469 (393)**	**1,381 (362)**	**1,322 (348)**

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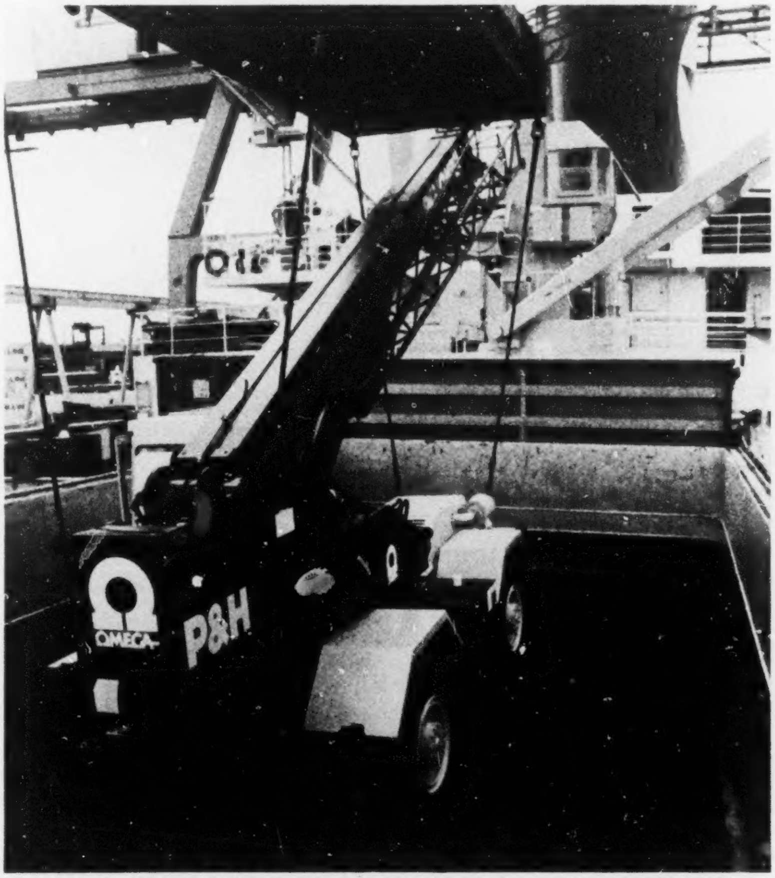

This is one of 13 hydraulic cranes that departed Los Angeles recently for direct shipment to New Zealand aboard Blue Star Line's Wellington Star. The cranes, which have lift capacities ranging between 15 and 20 tons, are to be used in construction of New Zealand's big gas-to-gasoline project.

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International Deep Drilling Costs Hit $1.3 Billion

by John Wilson, *Gulf Coast Editor*

International operators spent more than $1.3 billion drilling 72 wells past 15,000 ft in 1982, making more than 1.2 million ft of hole. In addition, approximately 35 wells were still drilling at year-end after reaching the 15,000-ft mark.

The 107 deep wells completed and active in 1982 equal 10% of the record 1,205 deep wells drilled in the U.S. last year. The $1.3 billion in costs, however, come to more than 18% of the $7 billion spent on U.S. deep wells in 1982.

There were 46 operators drilling deep wells worldwide using 32 contractors. Mud costs were approximately $61 million. Drilling costs hit $1.2 billion, and completion costs totaled $63 million.

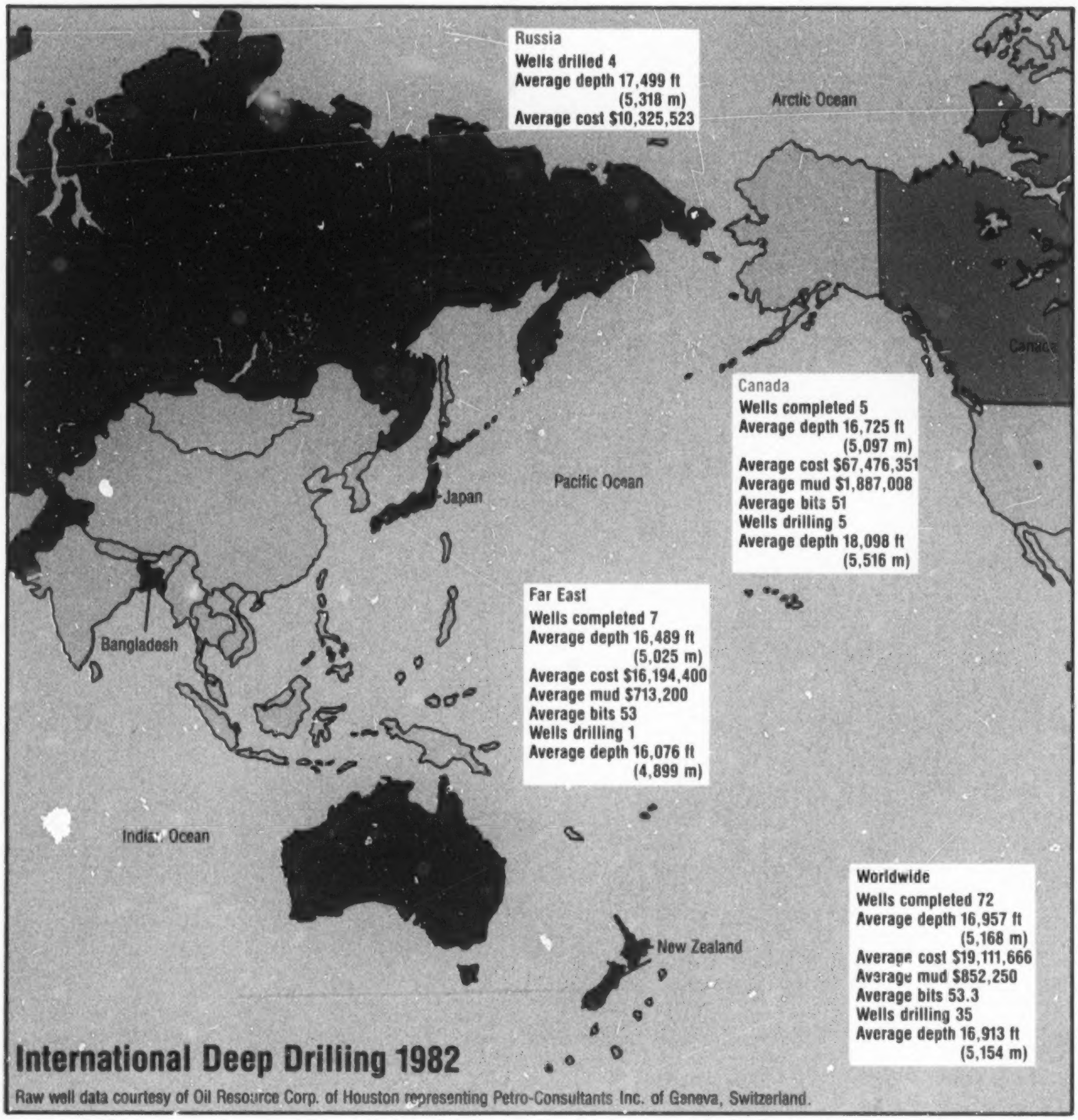
The average well cost was $19,111,666, nearly three times the U.S. average deep well cost in 1982. At first glance this is a staggering figure, especially in view of U.S. average costs, until the profile of international deep wells is considered.

More Exploratory Drilling

First, only 45% of U.S. deep wells are exploratory compared to nearly 78% worldwide. The higher percentage of development wells in the U.S. report tends to dampen cost figures because development wells are easier to plan and manage.

Second, the high percentage of deep exploratory wells worldwide was compounded by the fact that

The Zapata Ugland semisubmersible drills the Bonanza M-71 for Mobil Canada offshore Nova Scotia. The well was completed in February this year at 17,371 ft.


Russia
Wells drilled 4
Average depth 17,499 ft (5,318 m)
Average cost $10,325,523
Arctic Ocean
Canada
Canada
Wells completed 5
Average depth 16,725 ft (5,097 m)
Average cost $67,476,351
Average mud $1,887,008
Average bits 51
Wells drilling 5
Average depth 18,098 ft (5,516 m)
Pacific Ocean
Japan
Bangladesh
Far East
Wells completed 7
Average depth 16,489 ft (5,025 m)
Average cost $16,194,400
Average mud $713,200
Average bits 53
Wells drilling 1
Average depth 16,076 ft (4,899 m)
Indian Ocean
New Zealand
Worldwide
Wells completed 72
Average depth 16,957 ft (5,168 m)
Average cost $19,111,666
Average mud $852,250
Average bits 53.3
Wells drilling 35
Average depth 16,913 ft (5,154 m)

International Deep Drilling 1982

Raw well data courtesy of Oil Resource Corp. of Houston representing Petro-Consultants Inc. of Geneva, Switzerland.

nearly half those wells were drilled offshore where costs are greater.

In addition, much of the exploration activity took place in hostile environments – the North Sea, offshore Canada, desert regions, and other such frontier areas.

The large number of exploratory wells also accounts for the higher bit use average compared to U.S. deep wells. Bit usage worldwide was 53.3 compared to 37.3 in the U.S. in 1982.

The higher average is probably due to the nature of exploration drilling – formation changes often force operators to pull green bits in favor of something more suitable. Higher mud weights also slow penetration rates and cut into bit life.

As for the large percentage of deep exploration wells worldwide, many of the operators PEI interviewed felt such wells probably were being used for stratigraphic control – the best way to understand a basin is to take a well to the basement and use the hard data gathered there to calibrate seismic work in the area. Since the size of worldwide lease holdings and concessions exceeds U.S. leases by a great percentage, it is advantageous and economical to drill exploratory wells in many countries. This also accounts for the fairly even distribution of international deep wells with one or two per country in active exploration areas known for shallow production.

Operators in the areas of greatest activity, however,

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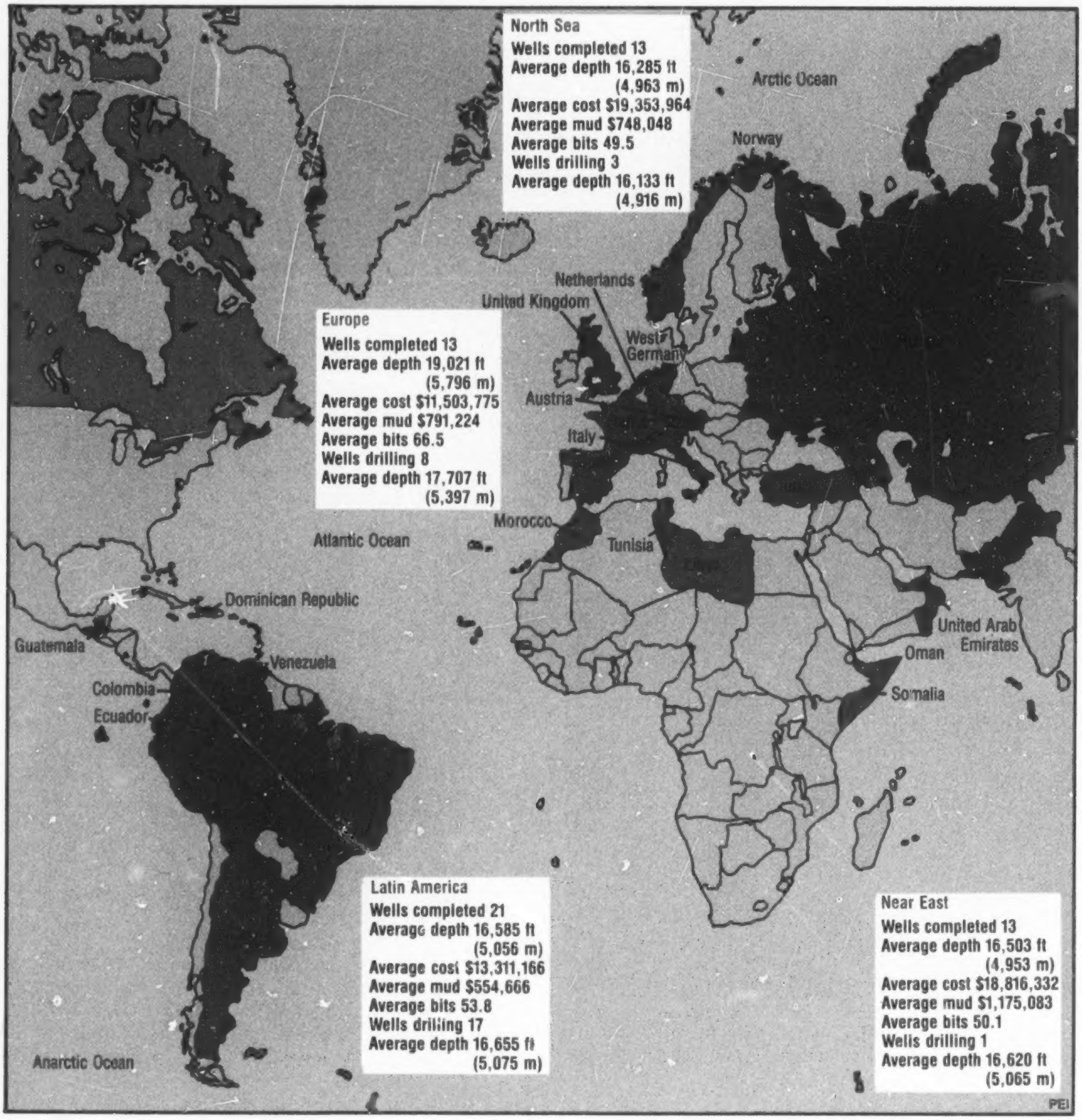

Arctic Ocean
Norway
Netherlands
United Kingdom
West Germany
Austria
Italy
Morocco
Tunisia
Atlantic Ocean
Dominican Republic
Guatemala
Venezuela
Colombia
Ecuador
United Arab Emirates
Oman
Somalia
Anarctic Ocean
PEI

North Sea
Wells completed 13
Average depth 16,285 ft (4,963 m)
Average cost $19,353,964
Average mud $748,048
Average bits 49.5
Wells drilling 3
Average depth 16,133 ft (4,916 m)

Europe
Wells completed 13
Average depth 19,021 ft (5,796 m)
Average cost $11,503,775
Average mud $791,224
Average bits 66.5
Wells drilling 8
Average depth 17,707 ft (5,397 m)

Latin America
Wells completed 21
Average depth 16,585 ft (5,056 m)
Average cost $13,311,166
Average mud $554,666
Average bits 53.8
Wells drilling 17
Average depth 16,655 ft (5,075 m)

Near East
Wells completed 13
Average depth 16,503 ft (4,953 m)
Average cost $18,816,332
Average mud $1,175,083
Average bits 50.1
Wells drilling 1
Average depth 16,620 ft (5,065 m)

obviously were seeking productive hydrocarbons. In terms of individual countries, the UK sector of the North Sea led the list, drilling nine wells at an average depth of 16,396 ft. Italy completed six at an average depth of 20,191 ft, while Venezuela and Canada drilled five each and Brazil had four to average depths of 16,187, 16,725, and 16,288 ft, respectively.

Italy Drills Deepest

The deepest wells in this year's report, excluding Eastern Europe and the Soviet Union, were the Belvedere 1 at 23,843 ft and the San Bartolomeo 4 at 23,307 ft in Italy. Both wells are located east of Milano and south of Bergamo near the Malossa field.

The Belvedere 1 was suspended, and no results were announced for the San Bartolomeo 4 well. Both wells were drilled by Agip in ENI's exclusive area in the Po Valley.

The third deepest well belonged to the Abu Dhabi Oil Co. Ltd., which drilled the JRN YAP HUR 7 to a reported depth of 21,000 ft to bring in the deepest producer in this year's report.

Since the number of deep wells per country was relatively small, cost figures were averaged on an area-wide basis to protect confidentiality. There are six areas: the North Sea, Canada, the Near East: United Arab Emirates, Libya, Morocco, Tunisia, Somalia, and Oman; the Far East: Australia, New Zealand,

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Bangladesh, Japan, and Pakistan; Europe: France, Italy, West Germany, Austria, Spain, and Turkey; and Latin America: Venezuela, Brazil, Bolivia, Colombia, Argentina, Peru, Ecuador, the Dominican Republic, and Guatemala.

Latin America Leads the Way

Latin America was the most active area, completing 21 wells at an average depth of 16,585 ft and with an average cost of $13,311,166. Mud costs were about $554,666 and average bit usage was 53.8/well.

Brazil and Venezuela were the most active countries in Latin America. Brazilian activity was offshore.

Bawden Drilling is contractor for the two rigs on the Piper platform, located in the UK sector of the North Sea, where several deep, directional wells have been drilled.

Petrobras put two wells down past 15,000 ft in the Rio field in water depths of approximately 600 ft. Farther north up the coast, Hispanoil drilled the 1-ESS-44 by the province of Espirito Santo, while Petrobras completed the 1-PAS-11 to 15,354 ft southwest of the mouth of the Amazon river.

Venezuelan activity centered in the Lake Maracaibo area as well as the Machiques region. Wells averaged 16,187 ft. In addition, the country had the largest number of wells still drilling past 15,000 ft (11).

In the Near East, Abu Dhabi completed four wells at an average depth of 18,577 ft. Sources say deep drilling has increased only in the last 2 to 3 years in Abu Dhabi, spurred by interest in the Permian Khuff formation.

Well costs in the Near East averaged $18,816,332, the third highest after Canada and the North Sea. Mud costs averaged $1,175,083 and bits averaged 50.1/well.

Country-by-country analysis of 1982 international deep wells

Europe	**Wells completed**	**Average depth, ft**
Austria (4)*	0	0
France	2	19,573
Italy (2)	6	20,191
Spain (1)	1	17,621
Turkey (1)	0	0
West Germany	4	17,340
Latin America		
Argentina (2)	2	15,779
Bolivia	1	15,817
Brazil (3)	4	16,288
Colombia (1)	3	17,185
Ecuador	1	16.000
Guatemala	2	17,413
Peru	2	16,248
Venezuela (11)	5	16,187
Dominican Republic	1	15,952
Near East		
United Arab Emirates (1)	7	17,264
Libya	1	15,033
Morocco	1	15,846
Oman	1	15,400
Tunisia	1	15,151
Somalia	2	16,135
Far East		
Australia	3	16,766
Bangladesh	1	16,276
Japan	1	16,043
New Zealand	1	16,401
Pakistan (1)	1	16,404
North Sea		
Netherlands	1	15,856
Norway (1)	3	16,096
United Kingdom (2)	9	16,396
Canada (5)	5	16,725

*( )Wells drilling as of Jan. 1, 1983.

Average footage in the area was 16,503 ft for 13 wells.

The North Sea and Europe each had 13 completed wells in 1982. For the North Sea, the average depth was 16,285 ft with an average cost of $19,353,964. Bit usage was a low 49.5.

Most North Sea activity centered in the northernmost portion of the UK and Norwegian sectors as operators probed the Viking Central Graben. Drilling problems included pyrites around the fringes of the northernmost play, heaving shales in almost all areas, and Zechstein salt upthrusts. In addition, pressure gradients begin rising farther south through the 40s area toward the West German sector.

European activity centers in Italy, a traditional leader in international deep drilling. Most Italian wells are located in the Po Valley between the Alps and the Pyrenees, targeting the Dolomia Principale in the Triassic at 19,686 ft. This accounts for the 19,021-ft average depth for the European wells. Well costs in the area averaged $11,503,775 and bit usage was high at 66.5/well with mud costs at $791,224.

Canadian activity was exclusively offshore Nova Scotia, Newfoundland, and Labrador with wells averaging 16,725 ft and costing approximately $67 million/well. The high cost can be attributed to the frontier area which in several cases required drillships. Also, several wells encountered hole problems as well as abnormal pressure gradients. Canadian mud costs

Worldwide
All wells drilled to 15,000 ft or deeper

Average well depth	16,957 ft	5,168 m
Average cost/well	$19,111,666	
	($1,127/ft)	($3,968/m)
Average mud cost	$852,250	
	($50/ft)	($164/m)
Average bits/well	53.3	
	(317 ft/bit)	(96 m/bit)
Success ratio	26% (72 wells)	
Wildcat success ratio	25% (55 wells)	
Development success ratio	31% (17 wells)	
Total costs: Mud	**$61,362,041**	
Drilling	**$1,216,571,874**	
Completion	**$63,392,694**	
Total costs*	**$1,376,039,983**	
Total footage	**1,220,885 ft**	
	(372,108 m)	

*Total costs throughout this report include drilling and completion costs as well as other incremental costs such as rig mobilization and demobilization.

North Sea
All wells drilled to 15,000 ft or deeper

Average well depth	16,285 ft	4,963 m
Average cost/well	$19,353,964	
	($1,188/ft)	($3,900/m)
Average mud cost/well	$748,048	
	($46/ft)	($151/m)
Average bits/well	49.5	
	(329 ft/bit)	(100 m/bit)
Success ratio	15% (13 wells)	
Wildcat success ratio	25% (4 wells)	
Development success ratio	11% (9 wells)	
Total costs: Mud	**$9,724,624**	
Drilling	**$237,013,660**	
Completion	**$3,700,000**	
Total costs	**$251,601,542**	
Total footage	**$211,711 ft**	
	(64,518 m)	

Near East
All wells drilled to 15,000 ft or deeper

Average well depth	16,503 ft	4,953 m
Average cost/well	$18,816,332	
	($1,140/ft)	($3,799/m)
Average mud cost/well	$1,175,083	
	($71/ft)	($237/m)
Average bits/well	50.1	
	(329 ft/bit)	(99 m/bit)
Success ratio	23% (13 wells)	
Wildcat success ratio	18% (11 wells)	
Development success ratio	50% (2 wells)	
Total costs: Mud	**$15,276,079**	
Drilling	**$198,871,868**	
Completion	**$19,186,672**	
Total costs	**$244,612,303**	
Total footage	**214,550 ft**	
	(64,385 m)	

Latin America
All wells drilled to 15,000 ft or deeper

Average well depth	16,585 ft	5,056 m
Average cost/well	$13,311,166	
	($802/ft)	($2,633/m)
Average mud cost/well	$554,686	
	($33/ft)	($110/m)
Average bits/well	53.8	
	(308 ft/bit)	(94 m/bit)
Success ratio	33% (21 wells)	
Wildcat success ratio	23.2% (17 wells)	
Development success ratio	75% (4 wells)	
Total costs: Mud	**$11,647,986**	
Drilling	**$264,109,999**	
Completion	**$11,570,999**	
Total costs	**$279,534,499**	
Total footage	**348,296 ft**	
	(106,155 m)	

Europe
All wells drilled to 15,000 ft or deeper

Average well depth	19,021 ft	5,796 m
Average cost/well	$11,503,775	
	($605/ft)	($1,984/m)
Average mud cost/well	$791,224	
	($42/ft)	($137/m)
Average bits/well	66.5	
	(286 ft/bit)	(88 m/bit)
Success ratio	23% (13 wells)	
Wildcat success ratio	25% (12 wells)	
Development success ratio	0% (1 well)	
Total costs: Mud	**$10,285,912**	
Drilling	**$132,661,100**	
Completion	**$2,066,300**	
Total costs	**$149,549,075**	
Total footage	**247,277 ft**	
	(75,360 m)	

Far East
All wells drilled to 15,000 ft or deeper

Average well depth	16,489 ft	5,025 m
Average cost/well	$16,194,400	
	($982/ft)	($3,223/m)
Average mud cost/well	$713,200	
	($43/ft)	($142/m)
Average bits/well	53	
	(311 ft/bit)	(95 m/bit)
Wildcat success ratio	42% (7 wells)	
Total costs: Mud	**$4,992,400**	
Drilling	**$107,368,800**	
Completion	**$1,500,000**	
Total costs	**$113,360,800**	
Total footage	**115,422 ft**	
	(35,177 m)	

averaged $1.8 million while drilling costs averaged around $55 million. Bit usage was 51/well.

In the Far East, 7 wells were completed at an average cost of $16,194,400 and an average depth of 16,489 ft. Mud costs ran $713,200/well, with each well consuming 53 bits.

Soviet Deep Drilling

Soviet deep drilling activity continues mainly as a geologic evaluation tool, although there is still activity in proven areas. The Zapadno Well 65, in the center of the Dnieper-Donets basin in the Ukraine, reached 15,696 ft, and the Trostyanetskoye Well 2, also in the Dnieper-Donets basin, reached 15,384 ft.

In the Grozny field, the Severo-Brajury was still drilling at 22,967 ft. Well 35 in Azerbaijan bordering the Caspian Sea reached a TD of 15,749 ft.

In February 1983, the Communist Party newspaper *Izvestia* reported on a 26,248-ft well in Western Siberia (Purov region) near the Urengoi gas field. Other sources, however, have that well at 26,248 ft in May 1982 with a bottomhole temperature of 150 C.

The Soviets' long-term deep drilling program also has targeted wells at locations including Nizhniy Tagil near the Ural Mountains, Krivoy Rog in the Southern

Canada
All wells drilled to 15,000 ft or deeper

Average well depth	16,725 ft	5,097 m
Average cost/well	$67,476,351 ($4,034/ft)	($13,238/m)
Average mud cost	$1,887,008 ($113/ft)	($370/m)
Average bits/well	51 (327 ft/bit)	(99 m/bit)
Wildcat success ratio	20% (5 wells)	
Total costs: Mud	**$9,435,040**	
Drilling	**$276,546,460**	
Completion	**$17,966,361**	
Total costs	**$337,381,755**	
Total footage	**83,629 ft (25,488 m)**	

U.S.S.R.
All wells drilled to 15,000 ft or deeper

Wells drilled: 4*
Average depth: 17,499 ft
(5,318 m)
Average cost/well: $10,325,523
Total cost: $41,302,096

*Excludes superdeep stratigraphic wells

Average cost/meter

Depth, m	Cost/well	Cost/meter
4,500	$5,702,400	$1,267
5,000	$8,108,400	$1,622
5,500	$8,571,360	$1,558
6,000	$9,613,920	$1,602
6,500	$21,537,360	$3,313

Based on 1980 data published Nov. 15, 1982 in *Ekonomick Nefteryanoi Tromychlennoste (Economics of the Oil Industry)*. Dollars converted from rubles at $0.24/ruble.

1982 International Deep Well Contractors

Anmar Drilling
Atlantic Drilling Co. Ltd.
Atwood Oceanics Inc.
Bawden Drilling Inc.
Bow Valley Exploration Inc.
Celtic Drilling
DYVI Offshore A/S
Foramer
Forasol S.A.
Forex-Neptune
International Drilling Co.
Loffland Brothers Co.
Maersk Drilling
The Offshore Co.
ODECO Drilling
Oil Drilling & Exploration Ltd.
ONAREP
Pacnorse Drilling Corp.
Parker Drilling Co.
Penrod Drilling Co.
Perforaciones Marinas del Golfo
Rio Colorado Drilling Co.
Rowan Companies Inc.
Saipem S.p.A.
Salen Protexa Drilling Co.
Sedco Inc.
Sonpetrol
Teikoku Oil Co. Ltd.
Transocean Drilling Co. Ltd.
Westburne International Drilling L
Western Offshore Drilling and Exploration Co.
Zapata Off-Shore

1982 International Deep Well Operators

Abu Dhabi Marine Operating Co.
Abu Dhabi Oil Co. Ltd.
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Amoco UK Ltd.
Anschutz Corp.
Arabian Gulf Oil
Agip SpA
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Woodside Petroleum Ltd.
Yacimientos Petroliferos Fiscales-Argentina
Yacimientos Petroliferos Fiscales Les Bolivianos

Ukraine, and Norilsk in the northwest portion of Eastern Siberia.

Average well costs are running approximately $10.3 million. This is an estimate, however, since published cost data show an 18-month lag time.

In Yugoslavia, INA-Naftaplin completed the Polyice 1 Gamma well to 18,094 ft and had at least two other wells drilling past 18,000 ft.

As for the future of international deep drilling, it seems safe to say that the level of activity should tend to increase over the years for much the same reason it has increased in the U.S. As shallow reserves are depleted, operators will be forced to go deeper for reserve additions.

This report was compiled from raw well data courtesy of Oil Resource Corp. of Houston representing Petro-Consultants Inc. of Geneva, Switzerland. Operators supplied cost data on a confidential basis. The author wishes to thank Patricia Gallik and Joe Summa of Oil Resource Corp. for their assistance. Special thanks also go to Dr. Harry Walsh and Catherine Cauvin-Higgins at the University of Houston. ■

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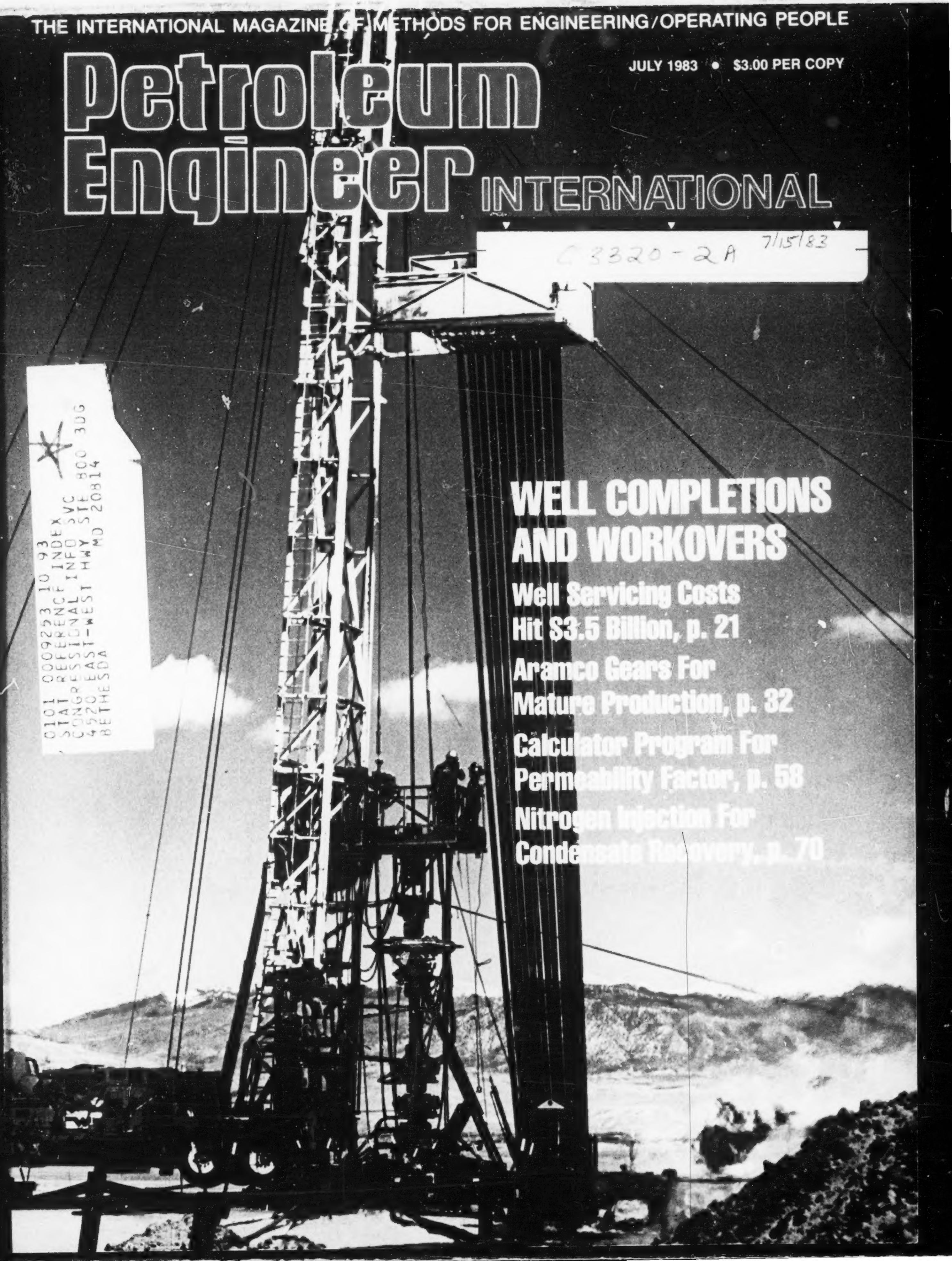

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ABOUT THE COVER: With the aid of injected nitrogen, a permanent packer is drilled out of a live well in Wyoming's Wind River Basin. Operator is Tom Brown Inc. (Photo by Cudd Pressure Control.)

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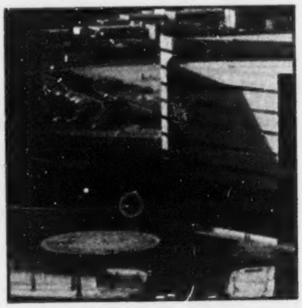

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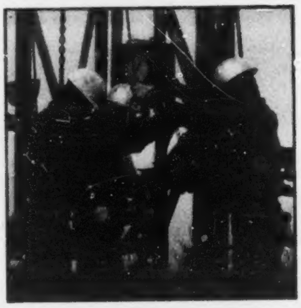

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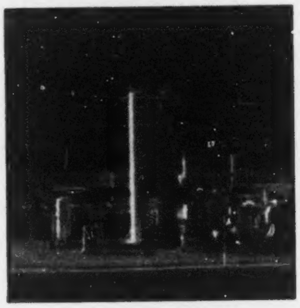

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by W. B. Bleakley, Editor. Nitrogen displaces the hydrocarbons in a rich-gas condensate reservoir while maintaining pressure above the dew point to prevent retrograde condensation.

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Engineering Profits into Energy Operations

Drillers Survive Spring Slump

Although the U.S. rotary rig count apparently is returning to its traditional pattern of declining from year-end peak to spring low, it seems to be doing it with a vengeance this year. Rigs running during the first five months of 1983 dropped by about 30%, compared with the normal decline of about 12%.

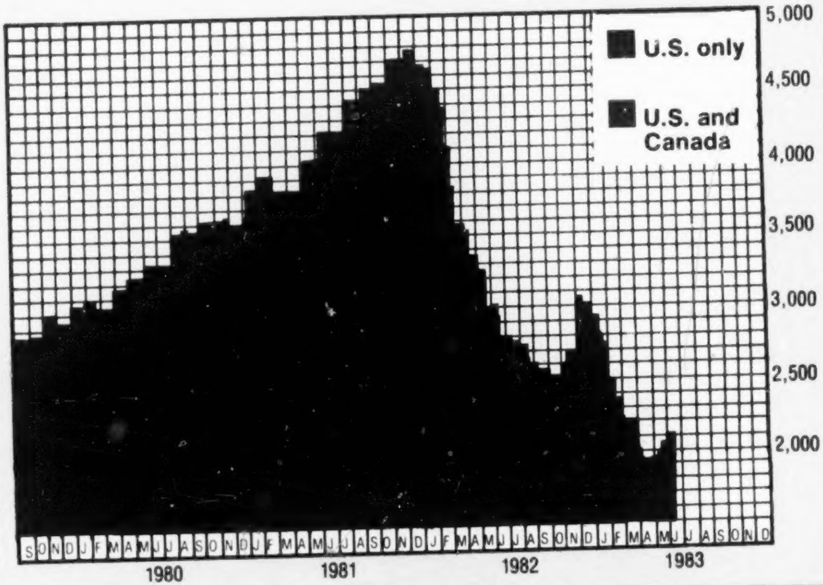
Nevertheless, indications are that the long slump has at least bottomed out. The average rig count so far this year (as of early last month) is 2,124, and Hughes Tool Co., compiler of the weekly count, is projecting an average count of 2,285 for the year. Last year's average rig count was 3,105.

Canadian drillers seem to be coming out of their spring slump, also, with their rig count gaining more than 100 rigs from early May to early June.

Rotary rigs actually making hole in United States & Canada

As Reported To International Association Of Drilling Contractors By Hughes Tool Co.

	May 16, 1983	May 23, 1983	May 30, 1983	June 6, 1983
Alabama				
Land	11	11	10	10
Inland Waters	3	3	3	3
Offshore	1	1	1	1
Alaksa				
Land	10	10	9	9
Offshore	6	6	5	5
Total	16	16	14	14
Arkansas	25	25	25	21
California				
Land	70	73	78	76
Offshore	21	22	25	25
Total	91	95	103	101
Colorado	42	45	41	47
Florida	5	4	5	5
Hawaii	1	1	1	1
Idaho	1	0	0	0
Illinois	59	62	59	73
Indiana	7	6	8	6
Kansas	109	116	115	115
Kentucky	7	7	7	11
North Louisiana	26	24	20	20
South Louisiana				
Inland Waters	41	41	42	45
Land	61	67	63	66
Offshore	121	122	126	129
Total	249	254	251	260
Michigan	19	21	23	22
Mississippi	26	27	23	23
Montana	15	15	15	22
Nebraska	13	11	7	5
Nevada	1	1	1	1
New Mexico	59	66	61	54
New York	6	11	14	17
North Carolina	—	1	1	1
North Dakota	29	30	30	38
Ohio	22	23	20	20
Oklahoma	270	253	243	247
Pennsylvania	8	12	13	13
Texas				
Offshore	55	60	55	52
Inland Waters	7	6	7	8
Dist. 1-S. Central Tex.	22	20	18	20
Dist. 2-Middle Tex. Coast	24	20	22	26
Dist. 3-Upper Tex. Coast	99	100	85	86
Dist. 4-Lower Tex. Coast	43	54	66	67
Dist. 5-Northeast Tex.	23	25	25	26
Dist. 6-Far Northeast Tex.	75	74	66	63
Dist. 7B-N. Central Tex.	63	50	57	54
Dist. 7C-W. Central Tex.	54	53	44	44
Dist. 8-Far West Tex.	89	91	83	86
Dist. 8A-West Tex.	55	52	56	64
Dist. 9-North Tex.	55	51	52	56
Dist. 10-Tex. Panhandle	46	45	47	48
Total	710	701	683	700
Utah	32	30	32	30
Virginia	1	1	1	1
Washington	1	1	1	1
West Virginia	27	37	28	32
Wyoming	58	59	60	64
Total U.S.	1,924	1.946	1,899	1,959
Canada	73	78	108	140
Canada-Offshore	6	7	7	8
U.S. and Canada	2,003	2,031	2,014	2,108



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Well Servicing Costs Hit $3.5 Billion

by Steven D. Moore, *Drilling Editor*

Although well servicing expenditures for 1982 didn't reach 1981's record level, totals are still impressive. In fact, with the exception of 1981, operators spent more money for well servicing in 1982 than in any other year.

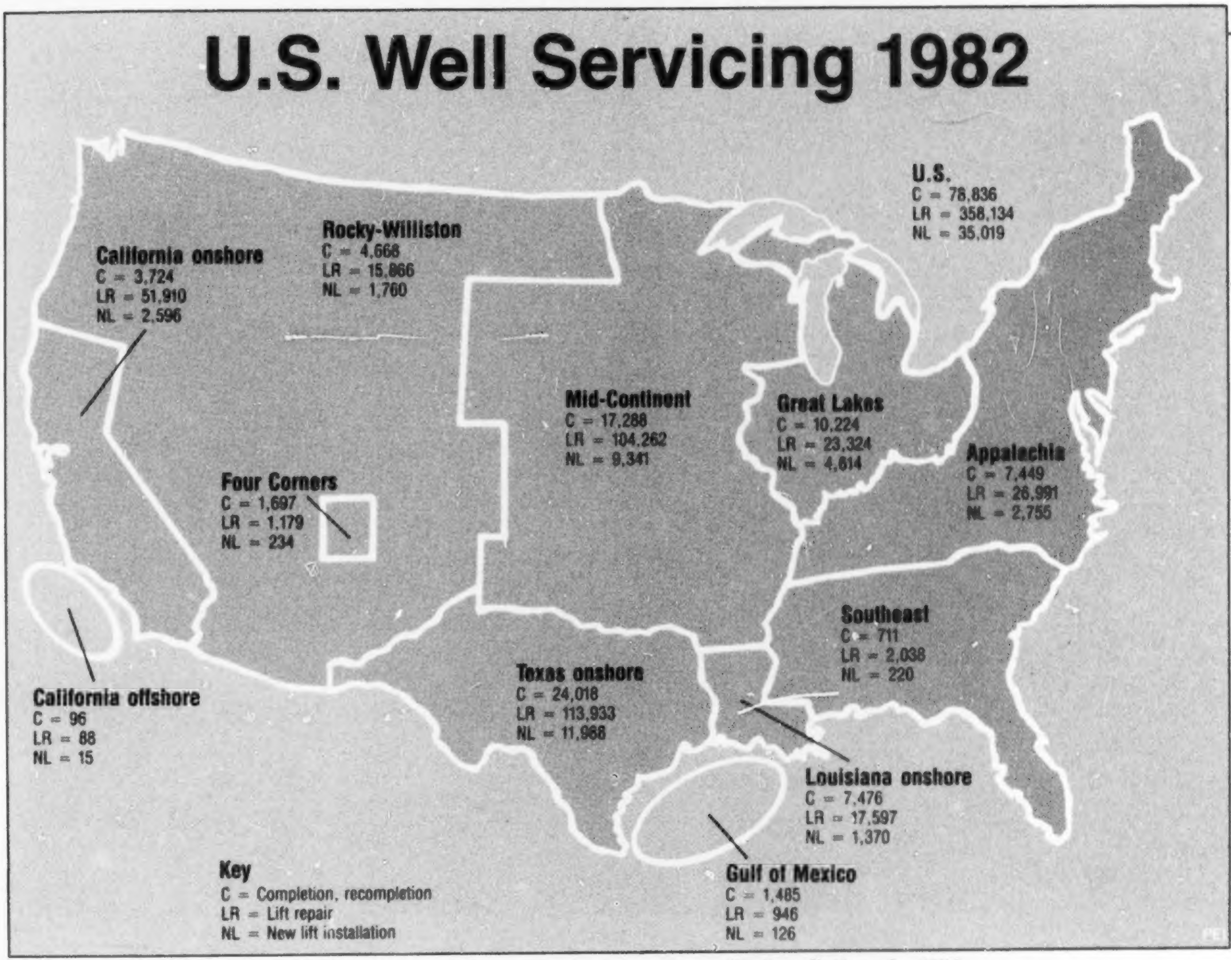
Results from PETROLEUM ENGINEER INTERNATIONAL's exclusive well servicing survey found that 1982 expenditures dropped some 12% from the $4.013 billion spent in 1981. In all, operators spent more than $3.5 billion to service and workover 834,872 U.S. oil and gas wells. The projected well servicing budget for 1983 is slightly more than $3.6 billion.

Even though operators are budgeting more for well servicing in 1983 doesn't mean they will spend it. In response to last year's survey, operators projected a total well servicing budget of $4.5 billion, but ended up spending only 78% of that money. Certainly 1982 was a unique year, but chances are operators won't spend their entire budgets this year either, particularly with the natural gas bubble.

Don't be surprised if operators spend only 80% to 85% of their estimated budgets this year, which would come to roughly $3 billion. If so, total well servicing expenditures will be about the same as they were for 1979 and 1980. But considering that rabid oil field inflation persisted during the interim and that total U.S. well population grew by approximately 100,000 wells between the end of 1980 and the beginning of 1983, operators will require less service work per well than in previous years.

With the downturn in the oil business last year, it's not surprising to find expenditures off in 1982. As crude oil prices declined and an oversupply of natural gas developed, drilling and well servicing activities tapered off. The big push to rejuvenate shut-in and abandoned wells that swept the industry in 1980 and 1981 was no longer there. In addition, many marginal wells brought on production in 1981 became uneconomical to produce in the latter half of 1982 as oil prices slumped.

From responses of over 200 operating companies, both majors and independents, PEI puts together an annual well servicing survey to monitor past activity, as well as future budget estimates. This year's survey is broken down into 11 different geographic regions. Tables 1, 2, and 4 are tabulations of completion, workover, and servicing totals for 1982; tables 5 through 15 summarize regional well servicing activity.


U.S. Well Servicing 1982
U.S.
C = 78,836
LR = 358,134
NL = 35,019
California onshore
C = 3,724
LR = 51,910
NL = 2,596
Rocky-Williston
C = 4,668
LR = 15,866
NL = 1,760
Mid-Continent
C = 17,288
LR = 104,262
NL = 9,341
Great Lakes
C = 10,224
LR = 23,324
NL = 4,614
Appalachia
C = 7,449
LR = 26,991
NL = 2,755
Four Corners
C = 1,697
LR = 1,179
NL = 234
Southeast
C = 711
LR = 2,038
NL = 220
Texas onshore
C = 24,018
LR = 113,933
NL = 11,968
California offshore
C = 96
LR = 88
NL = 15
Louisiana onshore
C = 7,476
LR = 17,597
NL = 1,370
Key
C = Completion, recompletion
LR = Lift repair
NL = New lift installation
Gulf of Mexico
C = 1,485
LR = 946
NL = 126

Breakdown by regions of completions-recompletions, lift repairs, and new lift installations for 1982.

Downturn In Spending

Of all the regions, Texas once again led in well servicing expenditures. Texas operators spent $1.147 billion in 1982 compared with $1.228 billion the previous year. Nearly one-third of the money spent on well servicing in the U.S. last year was spent in Texas. The trend should continue this year as the estimated cumulative budget for Texas exceeds $1.2 billion. Average servicing costs for a typical Texas well were down slightly from previous years to $4,351, compared with $4,935 and $4,840 in 1981 and 1980, respectively.

The Mid-Continent again was second to Texas in well servicing expenditures – the $681 million spent by operators in the area was approximately 19% of the total U.S. well servicing costs. Expenditures were off 4% from the $712 million spent in 1981, but the area's expected budget for 1983 is in the $716 million range. Servicing costs for the average Mid-Continent well slipped to $3,486 in 1982 from $3,861 the previous year.

The Gulf of Mexico continues to be the most expensive region in which to service wells. In fact, the $418 million spent last year in the area is nearly a 13% increase over 1981, when operators spent $370 million. In 1982 operators paid close to $42,000 per well for servicing. Of the onshore areas, the Rocky Mountains were the most expensive region for servicing work – typical servicing costs per well were about $12,400.

On the opposite end of the spectrum is the Appalachia region where operators spent an average $1,131 per well for well servicing, approximately half of what was spent on a well in the area in 1981. Decreased spending in the area reflects a reversing trend away from what happened in 1980 and 1981 when shut-in and marginal producing wells were commonly serviced. In addition, many producers who operate 500-ft deep wells opt to drill a new well instead of servicing an old well. Because of similar circumstances, the Great Lakes area also showed a significant drop in spending.

Over 50% of all 1982 U.S. well servicing expenditures were the accumulated totals of Texas and Mid-Continent. On a national average, the typical U.S. well required $4,232 in servicing – approximately 17% less than the $5,081 per well spent in 1981.

Well Population Climbs

Surprisingly, the number of completions and recompletions in 1982 exceeded 1981's record total by about 2% – completions and recompletions climbed from 77,457 in 1981 to 78,836 in 1982. Rig activity did not reflect this increase, but in part the rise was due to the lag time in reporting completions, as well as recompletions. Operators completed 56,204 wells last year, up from 55,167 wells in 1981. Development wells continue to outpace exploration wells 10 to 1.

Oil well completions dropped from a record high of

38,995 wells in 1981 to 37,821 wells last year. Still, oil well completions were way ahead of the 26,901 wells completed in 1980. Gas well completions showed a 12% increase last year over 1981, totaling 18,383 well completions compared with 16,172 wells in 1981. The number of recompletions increased to 22,632 wells.

The U.S. well population continues to climb at a steady pace – in fact, the number of producing wells increased for the eighth straight year. At the end of 1982, 834,872 wells were on stream, with 621,690 wells producing oil. In all, the number of producing wells climbed 6% over 1981. Well abandonments showed a slight increase from 10,452 wells in 1981 to 11,157 wells.

Total wells on artificial lift reached an all-time high of 577,261 wells in 1982, a 3.5% increase over the previous year. Approximately 93% of all U.S. oil wells are on some form of artificial lift.

Texas and the Mid-Continent led the way with a combined total of more than 41,000 completions and recompletions. Texas producers completed or recompleted 24,018 wells last year, a 2% increase over 1981. Conversely, Mid-Continent operators completed or recompleted 17,288 wells last year compared with 19,203 in 1981, a 10% drop.

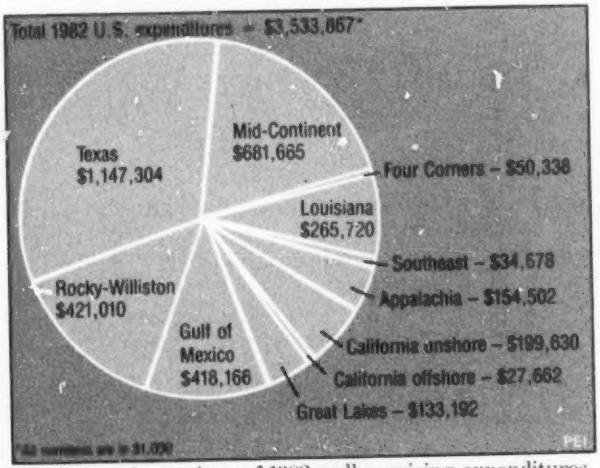
Tubular Repairs

Little change was denoted in the number of tubular repairs from 1981 to 1982. With the well servicing rig utilization rate down last year, one would not expect as many repairs as in 1981, but, again, lag time in reporting may have influenced these numbers. Furthermore, with the shortage of rigs, tubular goods, and equipment throughout 1981, many operators carried over needed repair work into 1982.

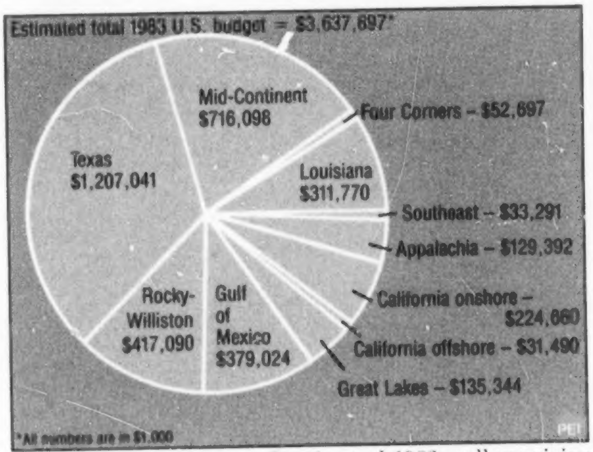
Tubular repairs totaled 68,599 for 1982, with tubing repairs outpacing casing repairs 8 to 1. Areas with the most activity were Texas, the Mid-Continent, and the Great Lakes. Table 3 gives a complete breakdown of tubing and casing repairs.

Stimulation

Acid and frac stimulation jobs for remedial work in 1982 were on par with 1981 – about 33,000 jobs each year. Actual numbers are probably higher, but some operators simply budget money for a particular field and do not record the total number of wells stimulated. Most active areas for stimulation work were Texas, the Mid-Continent, the Rockies, onshore California, and the Great Lakes. Fracturing tapered off due to the oversupply of natural gas – the operators did not have the price incentives to fracture tight gas reservoirs or deep gas pay zones, as in previous years.



Breakdown by regions of 1982 well servicing expenditures.



Breakdown by regions of estimated 1983 well servicing budgets.

Rod Pumping

As U.S. oil production matures, artificial lift will play a more important role. Of the oil wells on artificial lift, more than 85% use conventional rod pumping units. Over 32,000 wells were equipped with rod pumps last year, about the same as in 1981.

Meanwhile, the shortage of sucker rods in 1981 quickly turned into a surplus in 1982. It's nearly impossible to estimate total footage of sucker rods sold last year, because so many people were selling them. As 1982 wore on, manufacturers found their biggest competition coming from their own customers who needed to reduce inventories.

In addition, used rods made a comeback last year. When well servicing costs are high, operators will not take a chance on used rods, so they simply buy new ones. Now, with well servicing costs down, operators are willing to take the risk of buying used rods.

In many cases, so-called used rods are practically new. During the 1981 boom, promoters cut deals with investors for wells that could barely make a couple of barrels per day. Now many of these wells are abandoned and the rods, with little wear and tear, are available.

Also, pumping units and sucker rods are being moved from well to well these days – from low- to high-volume producers, within the capacity of the pumping unit. Operators are doing this to maintain as much production as possible without working over their low-volume wells. In other words, some operators are choosing to leave a 10-b/d well off production if the equipment can be moved to a better well.

Although this puts a real crunch on suppliers and manufacturers, well servicing contractors are keeping fairly busy, because, even though they are not servicing

TABLE 1. Completion, workover, servicing summary, by region, 1982

Region	Total wells	Completion, recompletion	Total art. lift	Lift repair	New lift installation	Tubular repair	Frac/acid stimulate	Total budget, $M
U.S.(1)	834,872	78,836	577,261	358,134	35,019	68,599	32,760	3,533,867
Appalachia	136,502	7,449	68,824	26,991	2,755	8,045	391	154,502
California onshore	50,428	3,724	46,426	51,910	2,596	5,203	2,828	199,630
California offshore	1,727	96	1,607	88	15	324	33	27,662
Four Corners	15,405	1,697	2,081	1,179	234	280	250	50,338
Great Lakes	83,635	10,224	60,621	23,324	4,614	13,199	2,525	133,192
Gulf of Mexico	9,729	1,485	834	946	126	434	466	418,166
Louisiana onshore	39,331	7,476	21,839	17,597	1,370	2,841	1,988	265,720
Mid-Continent (2)	195,533	17,288	156,465	104,262	9,341	16,726	8,745	681,665
Rocky-Williston	34,035	4,668	22,400	15,866	1,760	3,180	2,785	421,010
Southeast	4,898	711	3,165	2,038	220	707	231	34,678
Texas onshore (3)	263,649	24,018	190,999	113,933	11,988	17,660	12,518	1,147,304

(1) Excludes Alaska
(2) Includes Texas Panhandle
(3) Includes southeast New Mexico: excludes Texas Panhandle

TABLE 2. Completions and recompletions, by region

	Wells Jan. 1, 1983		Exploration		Development		Recompletions		
	Oil	Gas	Oil	Gas	Oil	Gas	Same zone	New zone	Abandons
U.S.(1)	621,690	213,182	2,235	2,385	35,586	15,998	12,484	10,148	11,157
Appalachia	70,448	66,054	170	654	2,587	3,234	658	146	1,373
California onshore	49,291	1,137	96	58	2,380	88	751	351	710
California offshore	1,727	—	7	—	61	—	25	3	4
Four Corners	2,259	13,146	42	112	249	1,029	163	102	113
Great Lakes	61,544	22,091	264	90	4,439	3,000	1,262	1,169	2,011
Gulf of Mexico	5,513	4,216	23	56	154	283	354	615	83
Louisiana	25,724	13,607	36	66	1,558	1,550	2,035	2,231	879
Mid-Continent(2)	160,457	35,076	431	215	9,424	2,764	1,874	2,580	1,902
Rocky-Williston	26,041	7,994	387	178	1,606	703	1,151	643	809
Southeast	3,801	1,097	35	24	208	129	115	200	54
Texas onshore(3)	214,885	48,764	744	932	12,920	3,218	3,219	4,096	3,219

(1) Excludes Alaska
(2) Includes Texas Panhandle
(3) Includes southeast New Mexico: excludes Texas Panhandle

TABLE 3. Tubular goods repair, by region

	Casing					Tubing				
	1978	1979	1980	1981	1982	1978	1979	1980	1981	1982
U.S.	6,631	3,772	6,566	8,778	7,898	24,615	62,946	49,598	58,198	60,701
Appalachia	—	—	926	1,056	1,025	—	—	4,783	5,252	7,020
California onshore	1,424	71	302	237	365	1,505	1,256	3,285	3,874	4,838
California offshore	—	—	14	9	28	—	60	67	192	296
Four Corners	—	85	32	22	83	—	505	129	51	197
Great Lakes	—	300	609	39	374	—	4,500	4,657	11,907	12,825
Gulf of Mexico	23	—	30	16	102	24	182	208	178	332
Louisiana onshore	211	180	189	953	446	1,631	1,513	1,451	4,578	2,395
Mid-Continent	1,361	1,400	1,944	1,243	1,537	11,055	25,202	13,145	16,270	15,189
Rocky-Williston	297	431	377	2,501	642	471	1,255	1,636	1,673	2,538
Southeast	—	42	46	404	77	—	357	391	445	630
Texas onshore	3,295	1,263	2,097	2,298	3,219	9,929	28,116	19,846	13,778	14,441

these low-volume wells, they are pulling the rods from one well and running them in another.

Overall, rod pump and sucker rod repair last year was off from 1981 levels. Rod pump repairs came close to the previous year, 207,000 jobs compared with 216,000 in 1981, but sucker rod work dropped significantly from 199,000 to 130,000 jobs. Partly the decline in sucker rod work was due to all the new sucker rods put into wells during the two previous years. Historically rod pump repairs outnumber sucker rod jobs about 2 to 1, so after 2 years of an abnormally high percentage of sucker rod jobs, the industry has returned to a more traditional ratio.

Other Artificial Lifts

Installation of other forms of artificial lift dipped last year compared with the previous year. With pump jacks practically being given away during the last 2 years, the trend is not too surprising. Operators brought more than 2,600 wells on production using either electric submersible pumps, hydraulic pumps, or gas lift.

Of the three types of lifts, electric submersible pumps were installed in the most wells. With increasing water cuts in many producing wells, higher pump capacity is needed to produce the same amount of oil,

TABLE 4. Total U.S. service jobs in 1982

Abandoned (old wells)	11,157
Recompletions – same reservoir	12,484
Recompletions – different reservoir	10,148
Stimulation – acid or frac	32,760
Tubing repair or replacement	60,701
Casing repair	7,898
Rod pump repair	207,2[illegible]3
Sucker rod work	129,825
New rod pump installation	32,338
Submersible pump repair	7,840
New submersible pump installation	1,380
Hydraulic pump repair	7,639
New hydraulic pump installation	327
Gas lift repair	5,537
New gas lift installation	974

TABLE 6. California onshore service jobs in 1982

Abandoned (old wells)	710
Recompletions – same reservoir	751
Recompletions – different reservoir	351
Stimulation – acid or frac	2,828
Tubing repair or replacement	4,838
Casing repair	365
Rod pump repair	31,542
Sucker rod work	17,288
New rod pump installation	2,339
Submersible pump repair	963
New submersible pump installation	122
Hydraulic pump repair	1,656
New hydraulic pump installation	43
Gas lift repair	361
New gas lift installation	92

TABLE 8. Four Corners service jobs in 1982

Abandoned (old wells)	113
Recompletions – same reservoir	163
Recompletions – different reservoir	102
Stimulation – acid or frac	250
Tubing repair or replacement	197
Casing repair	83
Rod pump repair	784
Sucker rod work	348
New rod pump installation	229
Submersible pump repair	47
New submersible pump installation	5
Hydraulic pump repair	—
New hydraulic pump installation	—
Gas lift repair	—
New gas lift installation	—

TABLE 10. Gulf of Mexico (offshore only) service jobs in 1982

Abandoned (old wells)	83
Recompletions – same reservoir	354
Recompletions – different reservoir	615
Stimulation – acid or frac	466
Tubing repair or replacement	332
Casing repair	102
Rod pump repair	—
Sucker rod work	—
New rod pump installation	—
Submersible pump repair	52
New submersible pump installation	5
Hydraulic pump repair	—
New hydraulic pump installation	—
Gas lift repair	894
New gas lift installation	121

TABLE 5. Appalachia service jobs in 1982

Abandoned (old wells)	1,373
Recompletions – same reservoir	658
Recompletions – different reservoir	146
Stimulation – acid or frac	391
Tubing repair or replacement	7,020
Casing repair	1,025
Rod pump repair	17,679
Sucker rod work	9,312
New rod pump installation	2,755
Submersible pump repair	—
New submersible pump installation	—
Hydraulic pump repair	—
New hydraulic pump installation	—
Gas lift repair	—
New gas lift installation	—

TABLE 7. California offshore service jobs in 1982

Abandoned (old wells)	4
Recompletions – same reservoir	25
Recompletions – different reservoir	3
Stimulation – acid or frac	33
Tubing repair or replacement	296
Casing repair	28
Rod pump repair	—
Sucker rod work	—
New rod pump installation	—
Submersible pump repair	58
New submersible pump installation	13
Hydraulic pump repair	—
New hydraulic pump installation	—
Gas lift repair	30
New gas lift installation	2

TABLE 9. Great Lakes service jobs in 1981

Abandoned (old wells)	2,011
Recompletions – same reservoir	1,262
Recompletions – different reservoir	1,169
Stimulation – acid or frac	2,525
Tubing repair or replacement	12,825
Casing repair	374
Rod pump repair	15,683
Sucker rod work	7,528
New rod pump installation	4,603
Submersible pump repair	113
New submersible pump installation	11
Hydraulic pump repair	—
New hydraulic pump installation	—
Gas lift repair	—
New gas lift installation	—

TABLE 11. Louisiana onshore service jobs in 1982

Abandoned (old wells)	879
Recompletions – same reservoir	2,035
Recompletions – different reservoir	2,231
Stimulation – acid or frac	1,988
Tubing repair or replacement	2,395
Casing repair	446
Rod pump repair	9,802
Sucker rod work	5,403
New rod pump installation	1,065
Submersible pump repair	432
New submersible pump installation	178
Hydraulic pump repair	1,525
New hydraulic pump installation	48
Gas lift repair	435
New gas lift installation	79

(Continued)

TABLE 12. Mid-Continent service jobs in 1982

Abandoned (old wells)	1,902
Recompletions – same reservoir	1,874
Recompletions – different reservoir	2,580
Stimulation – acid or frac	8,745
Tubing repair or replacement	15,189
Casing repair	1,537
Rod pump repair	58,117
Sucker rod work	40,718
New rod pump installation	8,676
Submersible pump repair	2,889
New submersible pump installation	431
Hydraulic pump repair	1,499
New hydraulic pump installation	54
Gas lift repair	1,033
New gas lift installation	180

TABLE 13. Rocky Mountains – Williston Basin service jobs in 1982

Abandoned (old wells)	809
Recompletions – same reservoir	1,151
Recompletions – different reservoir	643
Stimulation – acid or frac	2,785
Tubing repair or replacement	2,538
Casing repair	642
Rod pump repair	7,230
Sucker rod work	6,508
New rod pump installation	1,452
Submersible pump repair	1,247
New submersible pump installation	151
Hydraulic pump repair	767
New hydraulic pump installation	117
Gas lift repair	114
New gas lift installation	40

TABLE 14. Southeast service jobs in 1982

Abandoned (old wells)	54
Recompletions – same reservoir	115
Recompletions – different reservoir	200
Stimulation – acid or frac	231
Tubing repair or replacement	630
Casing repair	77
Rod pump repair	1,177
Sucker rod work	719
New rod pump installation	198
Submersible pump repair	49
New submersible pump installation	17
Hydraulic pump repair	30
New hydraulic pump installation	5
Gas lift repair	63
New gas lift installation	—

TABLE 15. Texas onshore service jobs in 1982

Abandoned (old wells)	3,219
Recompletions – same reservoir	4,096
Recompletions – different reservoir	2,108
Stimulation – acid or frac	12,518
Tubing repair or replacement	14,441
Casing repair	3,219
Rod pump repair	65,179
Sucker rod work	42,001
New rod pump installation	11,021
Submersible pump repair	1,990
New submersible pump installation	447
Hydraulic pump repair	2,162
New hydraulic pump installation	60
Gas lift repair	2,601
New gas lift installation	460

so the trend toward electric submersibles should continue.

The four most popular areas for electric submersible pumps are Louisiana, Texas, the Mid-Continent, and the Rockies. Average operating time between failures is approximately 1¼ to 1½ years. Operating life is about twice as long in the Mid-Continent than in Texas because of lower pressures and temperatures and less corrosion. One operator in California averages nearly 2 years between failures.

Hydraulic pumps captured only about 1% of the artificial lift market last year. Operators in several regions installed hydraulic pumps, but the most active area was the Rockies, where many of the installations were in isolated wells without access to electricity.

Gas lift installations have fallen over the past few years. The downturn is a mixture of several changing market forces. First, even though an oversupply of natural gas exists, the cost of gas has risen sharply over the years; natural gas for gas lift is affordable in only a few select areas, predominantly offshore. Second, the cost of compressors and other surface equipment create high front-end expenses. And third, with increasing water cuts in most U.S. oil wells, the amount of gas needed to produce a barrel of oil is increasing.

Servicing Outlook

The well servicing contractor is facing the same predicament as the drilling contractor – an oversupply of rigs which has forced both drilling and servicing rig utilization rates below 50%. In addition, the prudent well servicing contractor is being squeezed at both ends of his market.

One problem is competition with the contractor who readily bids suicide rates to stave off bankruptcy. The situation is improving somewhat as some of these contractors go out of business and more operators are willing to accept reasonable bids in exchange for quality work.

He also must compete with drilling contractors who have entered the completion and 24-hr servicing market. Many drilling contractors are offering their rigs for practically nothing to keep them on location for completion of the well and to keep their rig crews busy. Drilling contractors are not expected to leave this market until their own industry turns around.

The outlook for the well servicing industry is not overly optimistic, but if the well servicing rig utilization rate has bottomed out, some of the industry's uncertainty about the future will be abated. Then contractors, service and supply companies, and manufacturers can all start planning for better times ahead.

Acknowledgement. Data presented were based on PETROLEUM ENGINEER INTERNATIONAL's 1982 well servicing survey. Responses came from more than 200 independent and integrated companies. Appropriate data base used for projections was corroborated with data published by API and Petroleum Information Corp. PEI also thanks Baker Oil Tools for helping to distribute surveys. ■

Oversupplies dampen profit picture

An oversupply of crude oil and of refined products was primarily responsible for the drop in earnings in the oil industry during the first quarter of 1983.

While the refining and marketing sectors of most companies lost money, the profit picture was also dampened by unusually warm weather and the recession, reducing demand and lowering prices.

The 99 companies responding to our survey report net income of $4.2 billion, a 16.6% drop from the previous year. Profit margin for the group fell from 3.9% to 3.6%.

Gains in crude oil, condensate, and natural gas production were more than offset by significantly reduced refining and marketing earnings and higher year-to losses in metals at Atlantic Richfield. Net income fell 14% during the first quarter.

Exxon posted a 26% increase in income for the quarter, earning $839 million in 1982 and $1.06 billion in 1983.

Disappointing results in refining, marketing, and chemicals operations due to an intensely competitive market are blamed for Gulf Oil's 37% decline in net earnings. The company faults companies with large quantities of low-cost Alaskan oil for forcing down gasoline prices in the U.S.

Mobil Corp. reported a 32% drop in earnings for the first quarter, falling from $369 million in 1982 to $250 million in 1983.

Increased interest charges resulting from the Cities Service acquisition adversely affected Occidental Petroleum's earnings picture. Net income in the first quarter 1982 was $61.1 million compared to $25.9 million this year.

A $38.6 million settlement from FERC more than offset the effect of sharply curtailed natural gas sales at Pennzoil. Earnings increased from $38.9 million in 1982 to $40.3 million in 1983.

Standard Oil of California's 35% earnings increase resulted mainly from the lower cost of crude oil,

GAS COMPANIES' FIRST QUARTER FINANCIAL REPORTS

	Three months ending March 31**							
	Revenues ($000)			Earnings* ($000)			Profit Margin‡	
Company	1983	1982	% Chg.	1983	1982	% Chg.	1983	1982
Alabama Tennessee N.G.	43,240	37,273	+ 16.0	1,643	1,671	- 1.7	3.8	4.5
American Nat. Resources	982,500	1,063,300	- 7.6	60,900	79,900	- 23.8	6.2	7.5
ARKLA	410,450	398,729	+ 2.9	32,741	45,781	- 28.5	8.0	11.5
Coastal Corp.	1,562,136	1,565,505	- 0.2	14,063	6,002	+134.3	0.9	0.4
Columbia Gas	1,756,506	1,875,546	- 6.3	67,677	93,455	- 27.6	3.9	5.0
Consolidated Nat. Gas	1,217,102	1,200,451	+ 1.4	70,179	87,695	- 20.0	5.8	7.3
El Paso Companies	1,222,838	1,055,581	+ 15.9	14,290	21,192	- 32.6	1.2	2.0
ENSERCH Corp.	991,561	1,004,460	- 1.3	43,516	59,495	- 26.9	4.4	5.9
Houston N.G.[1]	696,727	785,162	- 11.3	47,697	63,511	- 24.9	6.8	8.1
InterNorth	1,359,742	1,449,253	- 6.2	101,513	106,144	- 4.4	7.5	7.3
Mountain Fuel Supply	203,708	182,042	+ 11.9	26,457	22,479	+ 17.7	13.0	12.4
National Fuel Gas	402,991	398,741	+ 1.1	18,282	25,027	- 27.0	4.5	6.3
Northwest Energy	803,542	486,945	+ 65.0	32,577	32,564		4.1	6.7
NOVA, An Alberta Corp.	1,067,000	730,000	+ 46.2	32,500	27,400	+ 18.6	3.1	3.8
ONEOK Inc.[2]	349,072	378,689	- 7.8	22,184	30,539	- 27.4	6.4	8.1
Pacific Lighting	1,267,059	1,174,430	+ 7.9	32,507	28,757	+ 13.0	2.6	2.4
Panhandle Eastern	1,034,329	956,671	+ 8.1	61,568	73,361	- 16.1	6.0	7.7
Peoples Energy	593,963	702,009	- 15.3	34,013	40,536	- 16.0	5.7	5.7
Pioneer Corp.	288,665	302,413	- 4.5	21,517	29,843	- 27.9	7.5	9.9
Sonat Inc.	846,192	815,673	+ 3.7	65,605	63,199	+ 3.8	7.8	7.7
Southern Union Co.	345,810	344,494	+ 0.4	13,879	13,040	+ 6.4	4.0	3.8
Texas Eastern Corp.	1,459,441	1,424,588	+ 2.4	37,650	61,925	- 39.2	2.6	4.3
Texas Gas Transmission	791,556	783,264	+ 1.1	24,766	29,791	- 16.9	3.1	3.8
TransCanda PipeLines	923,493	1,020,555	- 9.5	46,423	38,724	+ 19.9	5.0	3.8
Transco Energy Co.	1,166,626	916,659	+ 27.3	36,785	36,062	+ 2.0	3.2	3.9
United Energy Resources	1,259,819	1,574,863	- 20.0	39,659	64,197	- 38.2	3.1	4.1
Westcoast Transmission	331,930	424,274	- 21.8	17,173	19,534	12.1	5.2	4.6
TOTAL	23,377,998	23,051,570	+ 1.4	1,017,764	1,201,824	- 15.3	4.4	5.2

*Earnings available to common. **Excluding non-recurring items. ‡Earnings* divided by Revenues.

[1] Ends April 30. [2] Ends February 28.

OIL COMPANIES' FIRST QUARTER FINANCIAL REPORTS

	Three months ending March 31**						Profit Margin‡	
	Revenues ($000)			Earnings* ($000)				
Company	1983	1982	% Chg.	1983	1982	% Chg.	1983	1982
Adobe Oil & Gas Corp.	41,703	53,864	- 22.6	5,671	5,901	- 3.9	13.6	11.0
Altex Oil	892	1,671	- 46.6	(319)	(30)			
Amerada Hess	1,844,206	2,373,216	- 22.3	4,988	(16,164)		0.3	
American Pacific	4,849	2,929	+ 65.6	(361)	(777)			
American Petrofina	425,339	575,214	- 26.1	336	15,995	- 97.9	0.1	2.8
American Quasar	11,552	14,815	- 22.0	(585)	1,959			13.2
Anglo Energy	62,147	93,748	- 33.7	(12,055)	2,109			2.3
Arapaho Petroleum	1,324	1,519	- 12.8	(264)	(222)			
Argo Petroleum	5,226	5,692	- 8.2	(725)	(593)			
Ashland Oil	1,814,065	2,213,666	- 18.1	(23,592)	(20,868)			
Asamera	88,882	113,465	- 21.7	(5,653)	(690)			
Atlantic Richfield	6,364,360	6,534,489	- 2.6	330,379	385,409	- 14.3	5.2	5.9
Beard Oil	8,354	9,109	- 8.3	(352)	429			4.7
Belco Petroleum	76,145	81,630	- 6.7	27,467	26,728	+ 2.8	36.1	32.7
Buttes Gas & Oil	32,244	54,125	- 40.0	1,127	2,062	- 45.0	3.5	3.8
Callon Petroleum[1]	6,163	4,804	+ 28.3	4	680	- 99.4	0.1	14.2
Commonwealth Oil Ref.	10,900	164,200	- 93.3	(3,000)	(18,000)			
Consolidated O&G[1]	9,510	11,535	- 17.6	(1,178)	(2,172)			
Crown Central	347,433	413,604	- 16.0	(10,833)	(3,367)			
Crystal Oil	49,032	61,027	- 19.7	(355)	(783)			
Damson Oil	20,896	16,263	+ 28.5	2,255	1,491	+ 51.2	10.8	9.2
Diamond Shamrock	855,433	791,135	+ 8.1	4,634	29,149	- 84.1	0.5	3.7
Discovery Oil	1,620	967	+ 67.5	(484)	(235)			
Dorchester Gas[1]	417,050	201,007	+107.5	2,589	3,988	- 35.1	0.6	1.9
Dyco Petroleum	12,740	14,287	- 10.8	2,372	3,950	- 39.9	18.6	27.7
Energy Reserves Group	38,421	42,247	- 9.1	3,546	573	+518.8	9.2	1.4
Enstar Corp.	93,815	95,074	- 1.3	11,229	10,541	+ 6.5	12.0	11.1
Equity Oil	5,512	6,017	- 8.4	1,142	1,238	- 7.8	20.7	20.6
Exeter Oil	1,096	1,071	+ 2.3	105	156	- 32.7	9.6	14.6
Exxon	23,705,000	26,841,000	- 11.7	1,060,000	839,000	+ 26.3	4.5	3.1
Felmont Oil Corp.	21,454	18,028	+ 19.0	4,244	2,865	+ 48.1	19.8	15.9
Forest Oil Corp.	36,904	39,069	- 5.5	4,028	3,425	+ 17.6	10.9	8.8
Freeport McMoRan	204,215	194,875	+ 4.8	21,114	26,536	- 20.4	10.3	13.6
Galaxy Oil	3,243	3,340	- 2.9	(346)	(564)			
Getty Oil	3,005,091	3,140,090	- 4.3	157,844	179,740	- 12.2	5.3	5.7
Gulf Energy & Dev.	30,014	15,374	+ 95.2	1,256	435	+188.7	4.2	2.8
Gulf Oil Corp.	6,898,000	7,535,000	- 8.5	182,000	288,000	- 36.8	2.6	3.8
Hadson Petroleum	4,714	10,555	- 55.3	1,034	5,180	- 80.0	21.9	49.1
Hamilton Bros. Petroleum	45,564	54,155	- 15.9	3,398	5,911	- 42.5	7.5	10.9
Helmerich & Payne	61,872	94,762	- 34.7	10,923	20,418	- 46.5	17.7	21.5
Hershey Oil	1,781	1,786	- 0.3	273	225	+ 21.3	15.3	12.6
Howell Corp.	40,590	66,838	- 39.3	105	794	- 86.8	0.3	1.2
Howell Petroleum	22,321	22,814	- 2.2	2,494	2,042	+ 22.1	11.2	9.0
Inexco Oil	42,568	62,827	- 32.2	2,693	7,607	- 64.6	6.3	12.1
KRM Petroleum	1,095	1,370	- 20.1	13	130	- 90.0	1.2	9.5
Lear Petroleum	54,105	54,706	- 1.1	4,607	1,765	+161.0	8.5	3.2
Louisiana L&E	253,277	304,297	- 16.8	26,630	13,452	+ 98.0	10.5	4.4
Mapco Inc	469,436	480,836	- 2.4	13,370	16,013	- 16.5	2.8	3.3
May Petroleum	8,709	7,519	+ 15.8	(649)	663			8.8
Maynard Oil	8,865	11,338	- 21.8	(261)	1,015			9.0
MCO Holdings Inc.	39,937	43,731	- 8.7	2,391	4,206	- 43.1	6.0	9.6
McFarland Energy	3,774	3,759	+ 0.4	988	986	+ 0.2	26.2	26.2
Mesa Petroleum	106,715	104,139	+ 2.5	37,836	29,604	+ 27.8	35.5	28.4
Mitchell Energy[2]	240,462	231,137	+ 4.0	19,187	16,313	+ 17.6	8.0	7.1
Mobil Corp.	14,288,000	16,439,000	- 13.1	250,000	369,000	- 32.2	1.8	2.2
Moran Energy	23,379	29,059	- 19.5	1,386	4,083	- 66.0	5.9	14.1
Murphy Oil	711,009	744,355	- 4.5	27,871	33,378	- 16.5	3.9	4.5
Natomas	366,557	389,629	- 5.9	(6,551)	49,854			12.8
Noble Affiliates	77,555	114,688	- 32.4	7,083	22,438	- 68.4	9.1	19.6
Norris Oil	716	675	+ 6.1	39	172	- 77.3	5.4	25.5
Nugget Oil Corp.[3]	1,652	2,568	- 32.2	(280)	258			10.0
Occidental Petroleum	4,890,000	4,211,700	+ 16.1	25,900	62,100	- 58.3	0.5	1.5
Oxoco	11,675	7,501	+ 55.6	2,040	1,691	+ 20.6	17.5	22.5
Pacific Resources	269,513	284,042	- 5.1	(4,732)	(1,747)			
Pennzoil Co.	559,816	587,176	- 4.7	40,318	38,951	+ 3.5	7.2	6.6
Petroleum Development	5,327	2,228	+139.1	308	(336)		5.8	
Petro-Lewis	100,523	57,664	+ 74.3	9,950	1,883	+428.4	9.9	3.3
Prairie Producing Co.	4,637	7,130	- 35.0	590	1,416	- 58.3	12.7	19.9
Phillips Petroleum	3,637,000	3,805,000	- 4.4	129,000	192,000	- 32.5	3.6	5.0
Presidio Oil	1,590	2,216	- 28.2	83	286	- 71.0	5.2	12.9
Quaker State	213,227	224,012	- 4.8	6,157	5,824	+ 5.7	2.9	2.6
Sabine Corp.	32,574	47,880	- 32.0	3,800	5,726	- 32.2	11.9	12.0
Seneca Oil	5,120	5,512	- 7.1	(1,323)	(593)			
Shell Oil	4,645,000	4,842,000	- 4.1	246,000	345,000	- 28.7	5.3	7.1
Southland Royalty	82,428	94,838	- 13.0	8,741	8,596	+ 1.7	10.6	9.1
Southwestern Energy	26,177	21,011	+ 24.6	5,449	4,220	+ 29.1	20.8	20.1
Standard California	6,995,000	10,020,000	- 30.2	310,000	230,000	+ 35.0	4.4	2.3
Standard Indiana	7,500,000	7,200,000	+ 4.2	399,000	470,000	- 5.1	5.3	6.5
Standard Ohio	2,766,000	3,617,000	- 23.5	277,000	455,000	- 39.1	10.0	12.6
Statex Petroleum[3]	3,003	3,368	- 10.8	(72)	581	+113.7	2.4	17.2
Sun Co.	3,740,000	4,060,000	- 7.9	90,000	124,000	- 27.4	2.4	3.1
Sundance Oil	22,646	23,364	- 3.1	2,078	(2,810)		9.2	
Superior Oil	457,563	530,684	- 13.8	23,698	83,378	- 71.6	5.2	15.7
Tenneco	3,609,000	3,766,000	- 4.2	111,000	128,943	- 13.9	3.1	3.4
Tesoro	515,138	606,346	- 15.0	4,134	3,765	+ 9.8	0.8	0.6
Texaco Inc.	10,148,000	12,986,000	- 21.9	319,000	367,000	- 13.1	3.1	2.8
Texas American	73,467	69,713	+ 5.4	2,582	2,002	+ 28.9	3.5	2.9
Texas International	34,976	44,777	- 21.9	238	2,977	- 92.0	0.7	6.7
Tosco Corp.	725,115	823,011	- 11.9	(46,603)	510			0.1
Total Petroleum N.A.	501,164	544,387	- 7.9	(37,096)	4,596			0.8
Tribune Oil	769	569	+ 35.2	314	182	+ 72.5	40.8	32.0
Union California	2,474,000	2,481,600	- 0.3	128,300	168,500	- 23.9	5.2	6.8
Universal Resources	12,578	17,086	- 26.4	(623)	3,008			17.6
Wainoco Oil	12,910	13,598	- 5.1	1,059	(2,746)		8.2	
Westcoast Petroleum	14,018	11,420	+ 22.7	3,608	2,992	+ 20.6	25.7	26.2
Wilshire Oil of Texas	2,812	3,027	- 7.1	747	279	+167.7	26.6	9.2
Wiser Oil	14,990	14,750	+ 1.6	3,960	3,642	+ 8.7	26.4	24.7
Woods Petroleum	18,480	20,332	- 9.1	4,710	5,767	- 18.3	25.5	28.4
Worldwide Energy	17,619	14,145	+ 24.6	1,381	(144)		7.8	
TOTAL	117,573,338	132,086,797	- 11.0	4,243,504	5,089,840	- 16.6	3.6	3.9

*Earnings available to common. **Excluding non-recurring items. ( ) Loss. ‡Earnings* divided by revenues. [1]Ends February 28. [2]Ends April 30. [3]Ends January 31.

reduced exploration expenses, and some firming of petroleum product prices toward the end of the quarter.

Standard Oil of Indiana's 5% earnings decline was largely attributable to poorer results for U.S. refining, marketing, and transportation operations, which suffered from severely depressed margins as a result of competitive gasoline market conditions.

Lower crude oil prices and sales volumes in petroleum exploration and production operations and lower margins in refining and marketing operations contributed to Standard Oil of Ohio's 39% drop in net income.

The combined effect of surplus supplies of crude oil, excess manufacturing capacity, and unneeded marine tonnage had a depressing impact on the gross operating margins for Texaco's manufacturing and marketing operations. Net income declined 13%.

American Petrofina's 98% drop in net earnings was primarily due to losses in the refining and marketing segment, where severe competition during the first two months of the quarter held prices below costs.

Anglo Energy posted a $12 million loss for the quarter due to reduced spending for exploration and production of oil and gas by major and independent oil companies in reaction in part to lower oil prices and gas oversupplies.

Ashland Oil also reported a net loss amounting to $14.5 million. The economic recession and petroleum market instability was blamed.

A net loss was reported by Beard Oil, totaling $352,000. Operating revenues were adversely affected by a decline in oil and gas sales due to lower oil prices and production and a decline in drilling and well servicing revenues.

Belco Petroleum posted a 3% increase in net income as a result of higher oil and gas production and prices in Canada and higher gas prices in the U.S.

Recent softness in oil and gas prices and the continued slowdown of industry-wide activities took its toll at Callon Petroleum. Earnings dropped 99%.

Despite increased revenues from expanded marketing activities, net income at Dorchester Gas decreased 35% due to lower gas takes resulting from the current oversupply of natural gas as well as continued weakness in coal markets and in contract drilling.

Improved results from gas transmission and distribution operations in Alaska and $4.1 million realized after taxes from the sale of a coal-producing property in Texas contributed to Enstar's 6.5% increase in earnings.

Gulf Energy & Development reported a 189% increase in net income due to increased gas throughput, increased natural gas liquid products sales, and higher natural gas liquid sales prices.

The 42.5% decline in earnings at Hamilton Brothers Petroleum was a result of decreased income from gas transportation systems, resulting from the current weak demand for natural gas.

Howell Corp. posted an 87% drop in earnings due to the continued weakness of conventional fuel products markets.

Louisiana Land & Exploration's net income increased 98% as a result of a decrease in dry holes and exploration charges and reduced overhead expenditures.

Losses sustained by onshore contract drilling operations were primarily responsible for the 66% drop in earnings at Moran Energy.

Natomas reported a $6.6 million loss for the first quarter due mainly to a loss by their transportation subsidiary, increased interest expense, and reduced prices for international petroleum production.

Superior Oil's 72% drop in earnings was due to lower world crude oil prices, unusually warm weather, and the recession's lingering impact on oil and gas demand.

Declines in exploration and production and refining and marketing resulted in a 14% drop in net income at Tenneco.

Texas International's net earnings dropped from $3 million in 1982 to $238,000 in the first quarter of 1983.

The 27 gas companies responding to our survey reported a 15% drop in net earnings in the first quarter. Profit margin fell from 5.2% to 4.4%.

The warm winter drove American Natural Resources' net income down 24% from the first quarter of 1982.

Coastal Corp. reported a 135% increase in earnings. Most of the improvement came from natural gas pipeline operations.

Consolidated Natural Gas Co. posted a 20% decline in net earnings due to the warmest weather in 30 years.

Successful oil and gas development drilling by Mountain Fuel subsidiaries contributed to the 18% increase in net income.

The main reasons for Pacific Lighting's 12% increase in earnings were better results of utility and energy-related operations.

Peoples Energy reported a 16% drop in net income due to increasing losses of large-volume commercial and industrial business to No. 6 oil, the low level of economic activity in the Chicago area, customer conservation, and unsatisfactory rate orders.

Lower prices and production volumes for North Sea oil, as well as combined effects of continued U.S. recession and mild winter weather resulted in a 39% drop in earnings at Texas Eastern.

United Energy Resources reported a drop of 38% in net earnings due to the economic recession, low alternate fuel prices, and the excess supply of natural gas. ■

FINANCIAL NOTEBOOK

Capital appropriations by the nation's 1,000 largest manufacturers remained virtually unchanged at $21 billion (seasonally adjusted) in the first quarter, according to The Conference Board.

The petroleum industry, whose appropriations are both volatile and large, increased its appropriations 17.3% during the quarter while other manufacturing industries recorded an 8% decline overall.

The Conference Board reports the current outlook is for capital appropriations to rise only 6% this year. Excluding petroleum, appropriations are expected to be up only 1%.

Mergers/acquisitions. Coquina Oil (Midland, Tex.), formerly a Fluor unit, was acquired by American National Petroleum (Houston, Tex.).

Meenan Oil agreed to sell the operating assets of its Blueray Systems unit to a Vari Corp. subsidiary.

Noarko Resources (Denver, Colo.) and Aztec Energy (Farmington, N. M.) agreed to merge.

Hamilton Brothers Petroleum agreed to sell its entire equity position in Gulf Energy & Development to The Penn Central Corp. for $22.3 million.

Canadian Occidental Petroleum will acquire Canada-Cities Service for $362.5 million (Canadian).

Terrapet Energy (Dallas, Tex.) withdrew from negotiations concerning the acquisition of Teton Energy (Denver, Colo.).

Diamond Shamrock plans to acquire up to 30.4 million common shares of Natomas Co. (San Francisco, Calif.). The company also intends to propose a merger of the two companies.

Properties acquired. United States Oil plans to purchase a block of Federal oil/gas leases covering about 54,500 acres in Montana.

Western Energy Development sold a 16.45% working interest in 11 producing wells and 507 surrounding acres in Runnels County, Tex. to Northstar Energy for $2.5 million.

Money Markets. Beard Oil plans to close on the sale of $10 million of its 12%, 15-year senior notes to an institutional investor. Proceeds will be used to repay a bank debt.

Saber Energy (Houston, Tex.) secured a $250 million working capital line of credit.

MGF Oil refinanced its existing secured bank debt for 2 years.

Contracts. Aramco awarded 2 engineering construction contracts for work in the Marjan Field off Saudi Arabia to Brown & Root.

National Supply's well control systems division was awarded a multi-million dollar contract from Union Oil of Thailand for the production of offshore platform wellhead equipment.

Briefs. Texas Gas Corp. changed their name to Texas Gas Resources Corp.

Foster Wheeler Corp. formed a new unit called Foster Wheeler Energy Resources. ■

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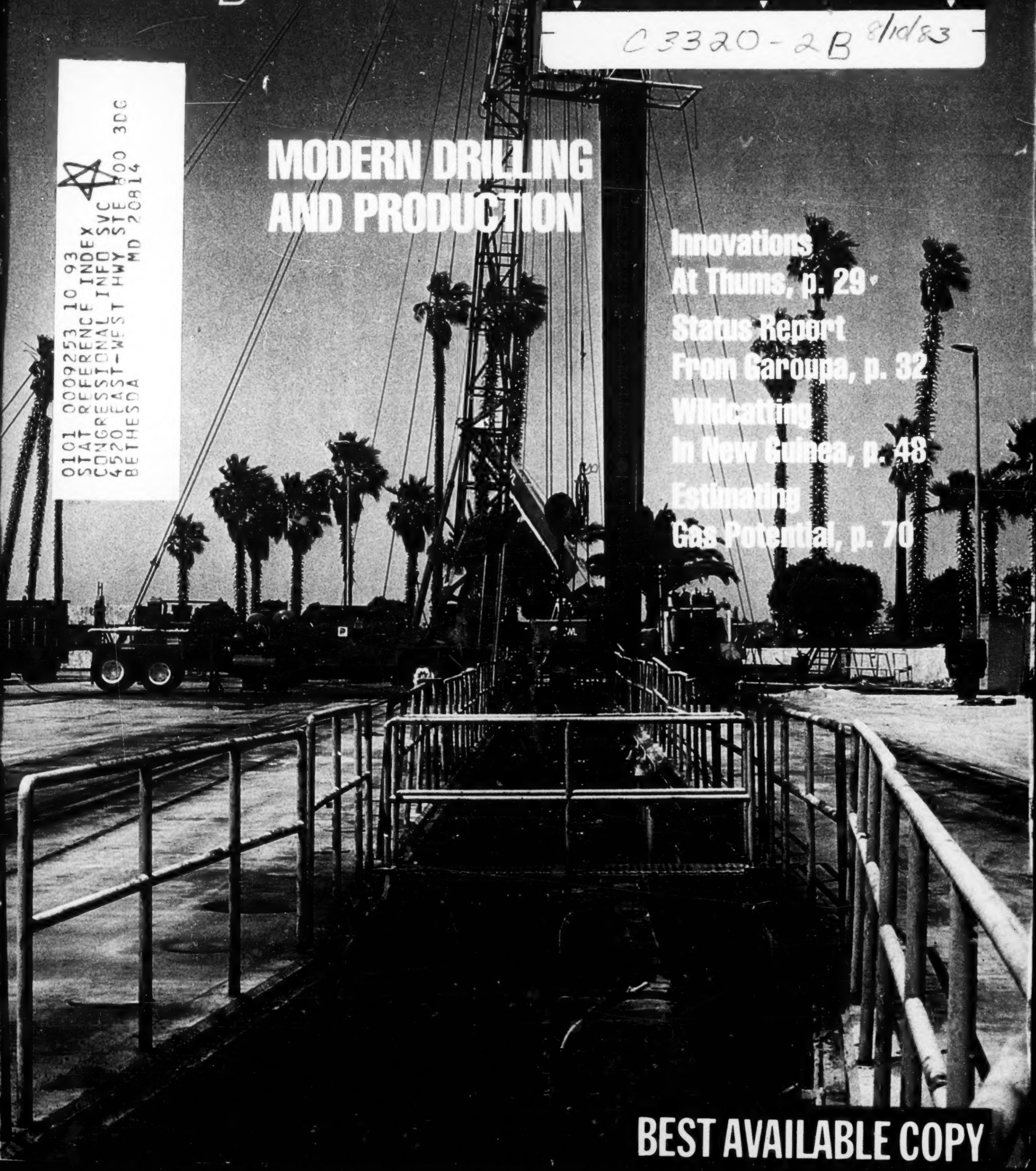

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ABOUT THE COVER: A well servicing rig is shown at work on one of the four THUMS Islands offshore Long Beach, Calif. (Photo courtesy of Pool Co.)

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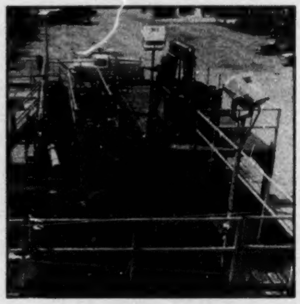
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29 Innovative Drilling Improves THUMS Islands Operations

by Steven D. Moore, Drilling Editor. The company was one of the first to use computer optimization for well bore planning and measurement-while-drilling tools for monitoring parameters.

32 Petrobras' Garoupa: Where It Stands, How It Got There

by Mauricio U. de Alvarenga, Petrobras, and W. B. Bleakley, Editor. Seven of the scheduled nine wells are on production, with wellheads housed in dry wellhead cellars.

48 Niugini Gulf Tackles New Guinea Wildcat

by Steven D. Moore, Drilling Editor. Located in the approximate center of the country, the Juha well is surrounded by dense jungle and is virtually inaccessible by surface transportation.

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Drilling Slump Leveling Off In U.S. And Canada

The U.S. rotary rig count hovered just over the 2,000 mark during the first two weeks of July after having endured 14 straight weeks under 2,000. The low point was 1,807, reached on April 18.

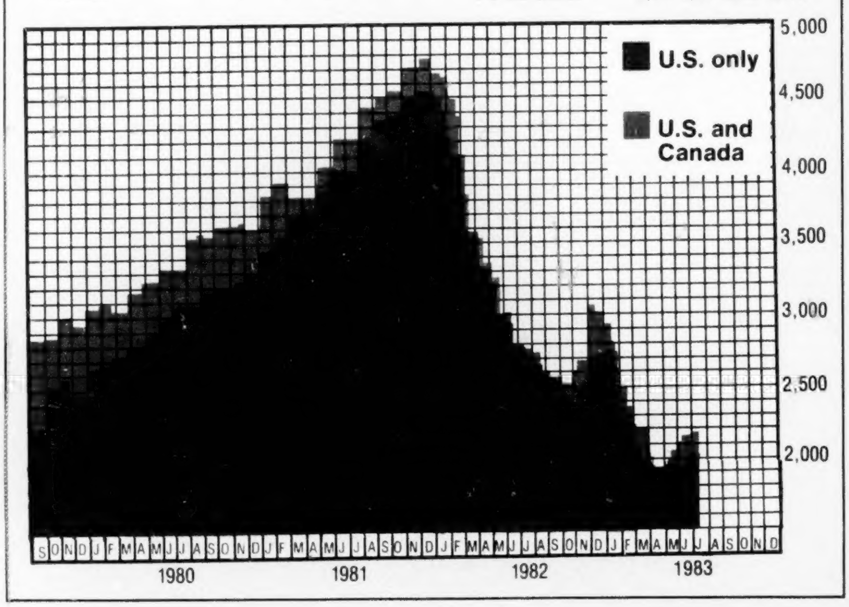
The average count for the first half of 1983 was 2,108, some 177 rigs below the 2,285 average being predicted by Hughes Tool Co. for the year as a whole. But, U.S. drilling traditionally climbs during the last half of the year, so the Hughes prediction looks pretty good right now.

Canada's half-year average count was 170, which is 10 rigs below the Hughes forecast for 1983. Chances are that Canadian drillers can come up to the forecast, but drilling activity there usually is highest in the first few months of each year. Nevertheless, Canadian drillers have rebounded strongly from 7-year low of 43 active rigs they reached on May 9.

Rotary rigs actually making hole in United States & Canada

As Reported To International Association Of Drilling Contractors By Hughes Tool Co.

	June 20, 1983	June 27, 1983	July 5, 1983	July 11, 1983
Alabama				
Land	9	11	8	8
Inland Waters	3	3	3	3
Offshore	1	1	1	1
Alaska				
Land	8	8	8	8
Offshore	5	4	4	4
Total	13	12	12	12
Arkansas	26	25	28	29
California				
Land	76	78	84	91
Offshore	25	24	24	24
Total	101	102	108	115
Colorado	55	53	55	57
Florida				
Land	4	4	6	6
Offshore	1	1	0	0
Total	5	5	6	6
Hawaii	1	1	1	1
Illinois	83	79	74	68
Indiana	7	7	6	3
Kansas	116	119	113	114
Kentucky	11	13	10	10
North Louisiana	19	19	27	25
South Louisiana				
Inland Waters	36	36	37	39
Land	69	68	71	72
Offshore	116	111	109	109
Total	240	234	244	245
Michigan	24	26	30	29
Mississippi	29	31	30	27
Montana	25	22	22	20
Nebraska	8	8	10	7
New Mexico	61	55	54	51
New York	12	13	10	10
North Carolina	1	1	1	1
North Dakota	47	52	54	50
Ohio	21	27	27	37
Oklahoma	257	256	266	262
Pennsylvania	16	20	18	17
South Dakota	1	1	1	0
Texas				
Offshore	51	50	45	46
Inland Waters	8	6	7	7
Dist. 1-S. Central Tex.	19	16	19	18
Dist. 2-Middle Tex. Coast	31	26	28	23
Dist. 3-Upper Tex. Coast	78	83	89	83
Dist. 4-Lower Tex. Coast	72	65	64	69
Dist. 5-Northeast Tex.	18	18	18	17
Dist. 6-Far Northeast Tex.	70	64	67	74
Dist. 7B-N. Central Tex.	55	56	56	55
Dist. 7C-W. Central Tex.	36	40	46	44
Dist. 8-Far West Tex.	83	82	81	80
Dist. 8A-West Tex.	58	57	55	50
Dist. 9-North Tex.	67	69	67	68
Dist. 10-Tex. Panhandle	41	37	37	40
Total	687	669	679	674
Utah	31	32	29	29
Virginia	0	1	1	1
Washington	1	1	1	2
West Virginia	34	38	39	37
Wyoming	63	64	77	90
Total U.S.	1,989	1,981	2,018	2,016
Canada	173	187	156	148
Canada-Offshore	9	9	9	10
U.S. and Canada	2,171	2,177	2,183	2,174



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International Rig Count Drops 14% In Year

The international rotary rig count declined by more than 200 rigs during the year between May 1982 and May 1983. That is a 14% drop in which all regions of the world, except the Middle East, participated.

The Middle East, in contrast, registered a 9% increase during that period. The big losers were Europe and the South Pacific, each off 27%. Africa was down by 25% and Latin American rotary rig activity evidenced a 16% decline. The Far East came close to holding its own, with a decline of 4%.

Offshore drilling also experienced a 14% drop during the year, and even the Middle East was unable to avoid the trend. Only the South Pacific, which went from nine offshore rigs to 12 (despite a decline of 10 rigs overall), could show any improvement offshore.

International Rotary Rig Report, prepared by Hughes Tool Co.

(Figures in parentheses indicate how many of each country's rigs are offshore rigs.)

	May 1982	April 1983	May 1983
Africa			
Algeria	78	70	60
Angola	8 (6)	14 (11)	12 (10)
Benin	0	1 (1)	1 (1)
Cameroun	6 (6)	5 (5)	5 (5)
Chad	1	0	0
Gabon	12 (8)	6 (5)	8 (8)
Ivory Coast	6 (6)	2 (2)	2 (2)
Libya	33 (2)	23 (2)	19 (1)
Morocco	6 (1)	8	8
Niger	5	0	0
Nigeria	27 (9)	18 (11)	18 (7)
Rep. of Congo	8 (5)	5 (5)	5 (5)
Rep. of Zaire	3 (1)	1	1
South Africa	2 (2)	2 (2)	2 (2)
Sudan	2	5 (1)	5 (1)
Tanzania	0	0	1
Tunisia	11 (3)	7	7
	208 (49)	167 (45)	154 (42)
Europe			
Austria	9	10	11
Denmark	2 (2)	5 (4)	5 (4)
France	30 (2)	15 (1)	15 (1)
Germany	30	27	24
Greece	6 (3)	3 (1)	3 (1)
Holland	18 (9)	16 (11)	16 (10)
Ireland	0	0	3 (3)
Italy	43 (7)	27 (9)	27 (9)
Norway	14 (14)	10 (10)	9 (9)
Portugal	1	1	1
Spain	14 (7)	6 (3)	6 (3)
Switzerland	1	1	0
United Kingdom	57 (55)	36 (36)	34 (32)
Yugoslavia	22	25	25
	247 (99)	182 (75)	179 (72)
Far East			
Bangladesh	3	2	2
Brunei	11 (8)	11 (8)	11 (8)
Burma	31	41 (1)	41 (1)
India	47 (7)	55 (13)	56 (14)
Indonesia	98 (37)	86 (24)	86 (24)
Japan	24 (6)	18 (2)	18 (2)
Malaysia	13 (13)	8 (8)	8 (8)
Pakistan	18	17	17
Philippines	14 (2)	8	8
Taiwan	4	0	0
Thailand	8 (5)	13 (7)	13 (7)
	271 (78)	259 (63)	260 (64)
Latin America			
Argentina	67	70 (1)	78
Barbados	1	1	1
Bolivia	13	7	7
Brazil	93 (29)	90 (33)	83 (27)
Chile	7 (3)	6 (3)	6 (3)
Colombia	26	18	17
Costa Rica	0	1	1
Ecuador	6 (1)	5	5
Guatemala	6	1	1
Mexico	211 (20)	189 (24)	189 (27)
Paraguay	1	0	0
Peru	26 (6)	14 (6)	15 (6)
Trinidad	13 (6)	12 (5)	11 (4)
Venezuela	68 (17)	40 (10)	37 (8)
	538 (82)	455 (82)	451 (75)
Middle East			
Abu Dhabi	38 (22)	40 (27)	39 (26)
Bahrain	1	1	1
Dubai	3 (2)	5 (3)	4 (4)
Egypt	36 (23)	38 (22)	38 (22)
Iran	0	2	7 (1)
Iraq	5	22	25
Jordan	0	3	3
Kuwait	5	5	6
Oman	13 (1)	10	10
Qatar	6 (3)	3 (3)	5 (3)
Ras Al Khaimah	2 (1)	1	0
Saudi Arabia	32 (19)	21 (7)	25 (11)
Sharjah	2	1	1
Syria	15	14	14
Turkey	26	23	23
Umm Al Qaiwain	1	1	1
	185 (71)	190 (62)	202 (67)
South Pacific			
Australia	35 (9)	22 (11)	24 (11)
New Zealand	1	2	2
Papua New Guinea	1	2 (1)	1 (1)
	37 (9)	26 (12)	27 (12)
Totals	1,486 (388)	1,279 (339)	1,273 (332)

Demonstration Plant To Upgrade Heavy Oil

A plant designed to demonstrate that tar sands and heavy oil can be upgraded into fuel gas, naptha, and middle distillates, which then can be processed into gasoline and distillate fuels via conventional refining technology, is expected to be constructed during the third quarter of 1983.

To be built in Pittsburgh, Calif., the plant will employ the Dynacracking process technology. It will be operated by the California Synfuels Research Corp. for a group that also includes Tenneco Oil Exploration and Production (40%), the Alberta Oil Sands Technology and Research Authority (20%), The Parsons Corp. (21%), and Dynalectron Corp. (14%).

Estimates are that as much as $71 million could be devoted to the project.

The U.S. Synthetic Fuels Corp. is to guarantee debt financing of up to $46.5 million, with equity financing of the remainder to come from the joint venture partners.

New York Group Backs Fire Fighters

The Independent Oil and Gas Association of New York has presented $38,000 to fire coordinators of Cattaraugus, Chautauqua, and Erie counties. The money is to be used for the purchase of fire fighting equipment and supplies that are to be available for use in the event of a well fire in the three-county area.

Contributors to the fund include oil and gas producers, drilling contractors, and service companies involved in drilling within the Bass Islands trend, where well fires have occurred in the past. The formation extends through portions of all three counties.

U.S. Finding Costs Fell In 1982

The cost to the oil industry for each new barrel of oil and equivalent natural gas discovered in 1982 was $11.78, according to John S. Herold Inc. of Greenwich, Conn. This was 3.3% less than the $12.18 cost to find a barrel of new reserve in 1981.

The finding cost of new oil outside the U.S. was $7.99 per barrel in 1982. This was substantially lower than in the U.S., but it still was 10.7% greater than the 1981 cost of $7.22 per barrel.

The weighted average cost for 1978 through 1982 was $10.75 per barrel in the U.S., $6.25 per barrel in foreign areas, and $8.89 per barrel worldwide.

Utah Resources Map Is Available Again

The Energy Resources Map of Utah, long out of print, now is available in a completely revised and updated edition. The 1:500,000-scale map shows locations of Utah's coal, oil, and gas fields, uranium, tar sand, and oil shale deposits, and geothermal areas.

Also shown are electric power plants, power transmission lines, and oil and gas pipelines. The 39 by 54-in., full-color map is available for $9 from the Utah Geologic and Mineral Survey, 606 Black Hawk Way, Salt Lake City, Utah 84108-1280. Ask for Map 68.

Mozambique Signs Exploration Agreement

The People's Republic of Mozambique has announced the signing of an exploration and production contract between Empresa Nacional de Hidrocarbonetes

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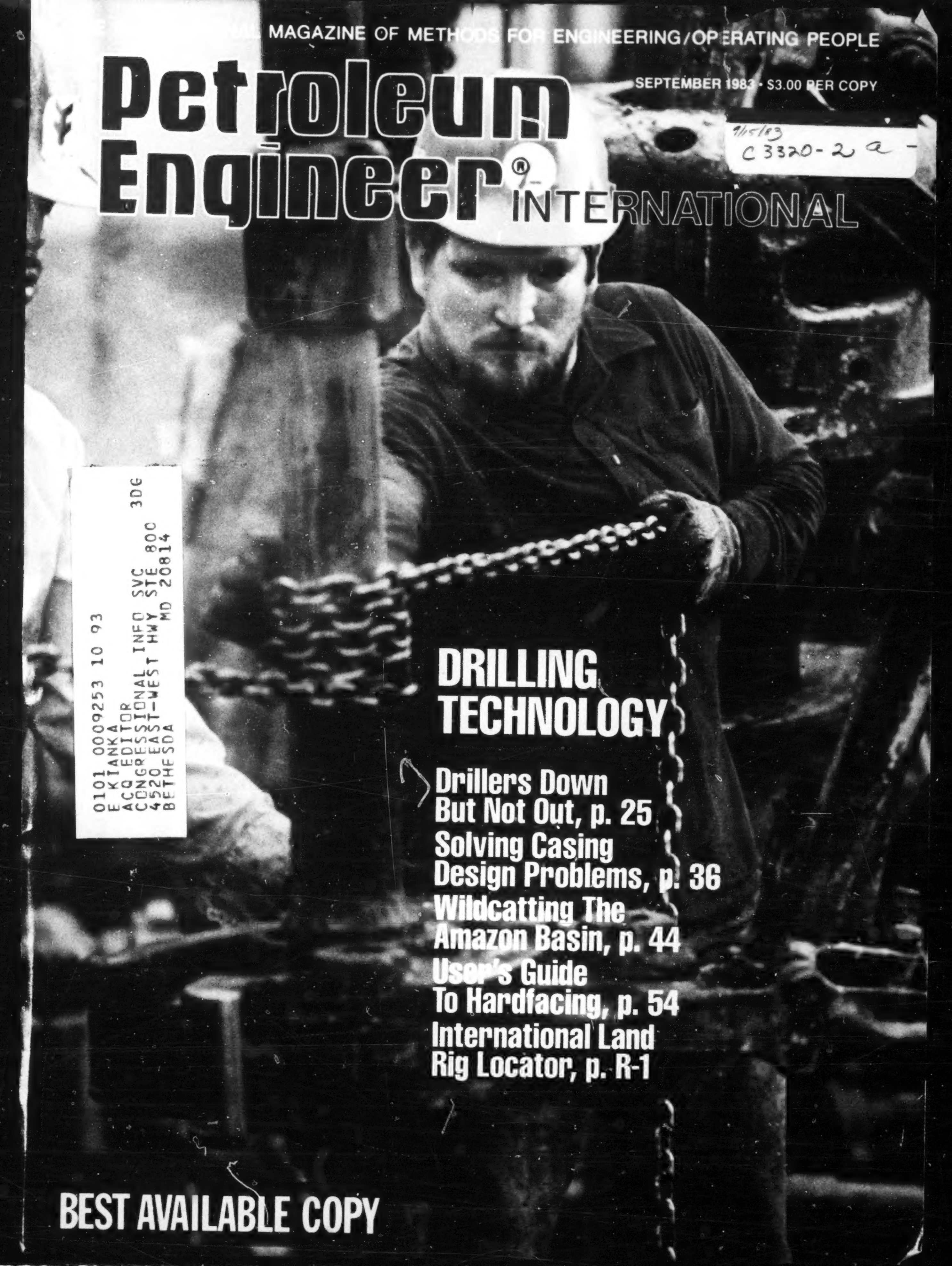

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ABOUT THE COVER: Drilling offshore Louisiana in Vermilion Block 48 in the Gulf of Mexico. (Photo courtesy of Diamond Shamrock Corp. and Michael Haynes Photography.)

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by John Wilson, Gulf Coast Editor. Targeted depth is approximately 7,700 ft below mudline, and drilling should take 120 days. Estimations are that a commercial find could be on production in 9 to 14 years.

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NEXT MONTH: Frontier drilling areas offshore Europe will share the spotlight in October with the venerable North Sea.

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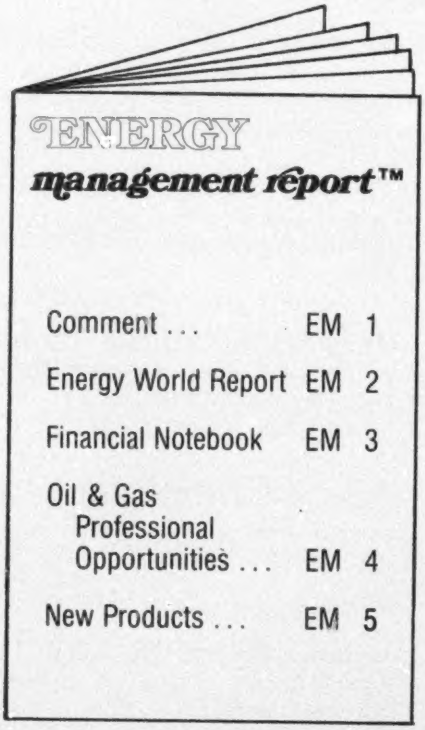

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U.S. Count Registers 100-Rig Increase

The U.S. rig count picked up almost 100 additional active rotaries during the period of this report, and the combined U.S. and Canadian increase was more than 120. All of the major drilling states took part in the increase — except California and Kansas, which were down only slightly going into mid-August.

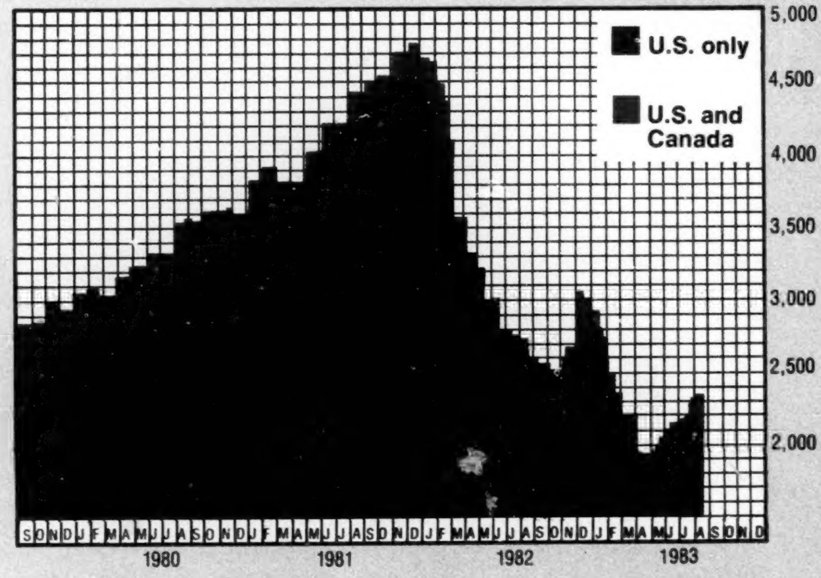
On a year-long basis, the average rig count for 1983 stood at 2,100.8 on August 8. That represents a decline of only one rig from the 2,101.8 average registered a month earlier, and is a clear indication that the precipitous decline in drilling is bottoming out at last.

Canadian drillers also are seeing more action these days, with more than 200 rigs active for the first time since last March 21. Thirteen of the Canadian rigs are operating offshore, where interest is high on the Scotian Shelf and off Newfoundland and Labrador.

Rotary rigs actually making hole in United States & Canada

As Reported To International Association Of Drilling Contractors By Hughes Tool Co.

	July 18, 1983	July 25, 1983	Aug. 1, 1983	Aug. 8, 1983
Alabama				
Land	7	11	13	13
Inland Waters	3	3	3	3
Offshore	1	1	1	1
Alaska				
Land	10	10	10	9
Offshore	5	5	5	5
Total	15	15	15	14
Arkansas	30	25	25	26
California				
Land	92	94	92	88
Offshore	23	23	24	24
Total	115	117	116	112
Colorado	49	54	58	51
Florida				
Land	5	4	4	5
Inland Waters	0	0	1	1
Total	5	4	5	6
Hawaii	1	1	1	1
Illinois	76	81	85	79
Indiana	5	7	7	5
Kansas	124	128	125	122
Kentucky	11	9	8	11
North Louisiana	26	29	31	33
South Louisiana				
Inland Waters	44	46	52	49
Land	71	68	71	78
Offshore	103	96	99	104
Total	244	239	253	264
Michigan	28	30	33	33
Mississippi	30	32	33	33
Montana	14	14	17	19
Nebraska	11	12	7	10
Nevada	1	1	1	1
New Mexico	43	41	49	40
New York	8	9	11	10
North Carolina	1	1	1	0
North Dakota	41	38	44	37
Ohio	36	40	40	43
Oklahoma	266	279	272	281
Pennsylvania	18	17	26	26
South Dakota	1	2	2	2
Texas				
Offshore	45	44	43	43
Inland Waters	6	6	8	7
Dist. 1-S. Central Tex.	15	18	14	11
Dist. 2-Middle Tex. Coast	32	22	23	22
Dist. 3-Upper Tex. Coast	87	87	84	95
Dist. 4-Lower Tex. Coast	67	74	78	68
Dist. 5-Northeast Tex.	24	25	25	28
Dist. 6-Far Northeast Tex.	72	71	74	74
Dist. 7B-N. Central Tex.	53	49	47	45
Dist. 7C-W. Central Tex.	49	48	49	50
Dist. 8-Far West Tex.	83	85	96	99
Dist. 8A-West Tex.	50	52	50	52
Dist. 9-North Tex.	75	77	74	79
Dist. 10-Tex. Panhandle	40	38	36	43
Total	698	696	696	716
Utah	27	29	30	37
Virginia	1	1	1	0
Washington	2	2	2	2
West Virginia	38	43	40	39
Wyoming	93	96	94	103
Total U.S.	2,043	2,078	2,114	2,140
Canada	191	197	198	210
Canada-Offshore	7	6	11	13
U.S. and Canada	2,241	2,281	2,323	2,363



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which was discovered in 1979 and has recoverable reserves estimated at 1.85 billion bbl.

If all goes as planned, there could be as many as 16 rigs operating off Canada's east coast this month, including five drillships in the Iceberg Alley area off Labrador.

Offshore northwestern Canada, in the Beaufort Sea-Mackenzie Delta area, Gulf Canada Ltd. seems determined to go ahead with its Beaufort Sea Drilling System, which includes two new-technology drilling rigs. One, the Mobile Arctic Caisson, is designed for use in the shallower waters and the other, the Conical Drilling Unit, is for use in deeper waters.

The caisson, which will go into service next year, is designed to be floated into position and lowered onto low berms on the ocean floor. It will then be filled with dredged material to keep it in place against ice movements.

The conical unit, named Kulluk (the Eskimo word for thunder), was launched earlier this year. Towed to each drilling location, it is held in position at each site by 12 anchor cables.

The Asia-Pacific area shows few signs of slowing down so far in 1983, and indications are that activity will actually increase later this year. Rig usage in the Far East is down only about 4% during the past 12 months, and increased wildcatting reported in the area by the energy advisors Gaffney, Cline & Associates earlier this year means that development activity can be expected to increase also.

Activity offshore China had been expected to be going great guns by now, but, aside from a deal with BP Petroleum Development Ltd. covering five contract areas in the South China Sea and the South Yellow Sea, the Chinese have had more trouble leasing tracts than had been expected. Most of the blame goes to the so-called worldwide oil glut, which is making it possible for oil companies to look before they leap into contracts that may be overly weighted in favor of the host nation.

In what may be a ploy to whet the industry's appetite, therefore, the official Chinese news agency recently announced what it calls a major breakthrough on the East China Sea's continental shelf. The Xinhua agency says that a 15,259-ft well located some 260 miles south of Shanghai is the area's first commercial producer of oil and gas. The agency said that the well is also the deepest of its kind in China.

But, China is not alone in feeling the effects of soft oil demand. Malaysia reportedly is adding incentives to its production sharing contracts, and Thailand's recent exploration and production agreement with MGF Oil Corp. calls for the government's top share of revenues to be approximately 57% – but only when, and if, production tops 30,000 b/d of oil.

International Rotary Rig Report, compiled by Hughes Tool Co.

(Figures in parentheses indicate how many of each country's rigs are offshore rigs.)

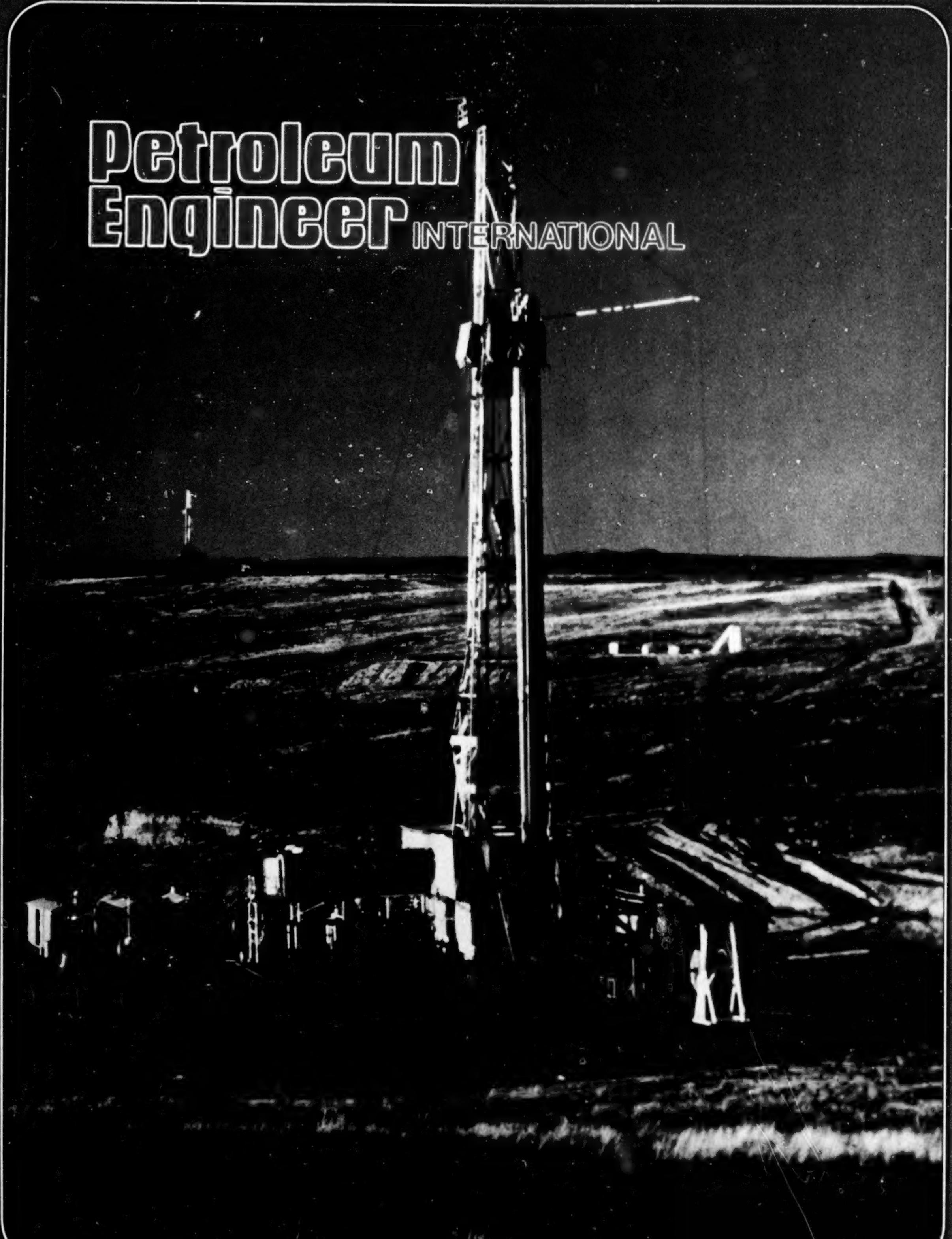
	June 1982	May 1983	June 1983
Africa			
Algeria	78	60	50
Angola	13(10)	12(10)	12(10)
Benin	1(1)	1(1)	1(1)
Cameroun	7(6)	5(5)	5(5)
Chad	1	0	0
Gabon	12(10)	8(8)	8(8)
Guinea	1(1)	0	0
Ivory Coast	4(4)	2(2)	2(2)
Libya	33(2)	19(1)	19(1)
Morocco	5(1)	8	8
Niger	1	0	0
Nigeria	30(13)	18(7)	18(7)
Rep. of Congo	7(7)	5(5)	5(5)
Rep. of Zaire	2(1)	1	1
Senegal	1	0	0
Sierra Leone	1(1)	0	0
South Africa	2(2)	2(2)	2(2)
Sudan	2	5(1)	5(1)
Tanzania	0	1	1
Tunisia	11(3)	7	7
	212(62)	154(42)	144(42)
Europe			
Austria	8	11	10
Denmark	2(2)	5(4)	5(4)
France	23	15(1)	15(1)
Germany	30	24	24
Greece	4(2)	3(1)	3(1)
Holland	18(10)	16(10)	16(10)
Ireland	2(2)	3(3)	3(3)
Italy	43(7)	27(9)	27(9)
Norway	13(13)	9(9)	9(9)
Portugal	1	1	1
Spain	12(5)	6(3)	6(3)
Switzerland	1	0	0
United Kingdom	62(59)	34(32)	41(38)
Yugoslavia	25	25	25
	244(100)	179(72)	185(78)
Far East			
Bangladesh	7	2	2
Brunei	8(6)	11(8)	10(7)
Burma	33	41(1)	41(1)
India	50(10)	56(14)	56(14)
Indonesia	95(32)	86(24)	90(23)
Japan	24(6)	18(2)	18(2)
Malaysia	13(13)	8(8)	9(9)
Pakistan	16	17	17
Philippines	15(3)	8	8
Taiwan	5	0	11(1)
Thailand	8(5)	13(7)	15(8)
	274(75)	260(64)	277(65)
Latin America			
Argentina	62(1)	78	75
Barbados	1	1	1
Bolivia	12	7	8
Brazil	92(28)	83(27)	85(32)
Chile	7(3)	6(3)	6(3)
Colombia	21	17	16
Costa Rica	0	1	1
Ecuador	6(1)	5	5
Guatemala	5	1	1
Mexico	194(23)	189(27)	189(27)
Paraguay	1	0	0
Peru	25(6)	15(6)	16(6)
Trinidad	14(6)	11(4)	8(3)
Venezuela	71(18)	37(8)	40(11)
	511(86)	451(75)	451(82)
Middle East			
Abu Dhabi	39(22)	39(26)	39(26)
Bahrain	1	1	1
Dubai	3(2)	4(4)	4(4)
Egypt	39(25)	39(22)	38(22)
Iran	0	7(1)	7(1)
Iraq	5	25	25
Jordan	0	3	3
Kuwait	5	6	6
Oman	12	10	10
Qatar	6(3)	5(3)	5(3)
Ras Al Khaimah	2(1)	0	0
Saudi Arabia	32(15)	25(11)	25(11)
Sharjah	3	1	1
Syria	15	14	14
Turkey	35	23	23
Umm Al Qaiwain	1	1	1
	198(68)	202(67)	202(67)
South Pacific			
Australia	34(8)	24(11)	23(12)
Fiji	1	0	0
New Zealand	1	2	2
Papua New Guinea	0	1(1)	2(1)
	36(8)	27(12)	27(13)
Totals	1,475 (399)	1,273 (332)	1,286 (347)
North America			
Canada	130 (5)	76 (7)	174 (9)
U.S.	2,908 (242)	1,926 (209)	1,974 (201)
TOTALS	**4,513 (646)**	**3,275 (548)**	**3,434 (557)**

FALL 1983 INTERNATIONAL

LAND RIG LOCATOR

Supplement to the September 1983 issue of

Petroleum Engineer INTERNATIONAL



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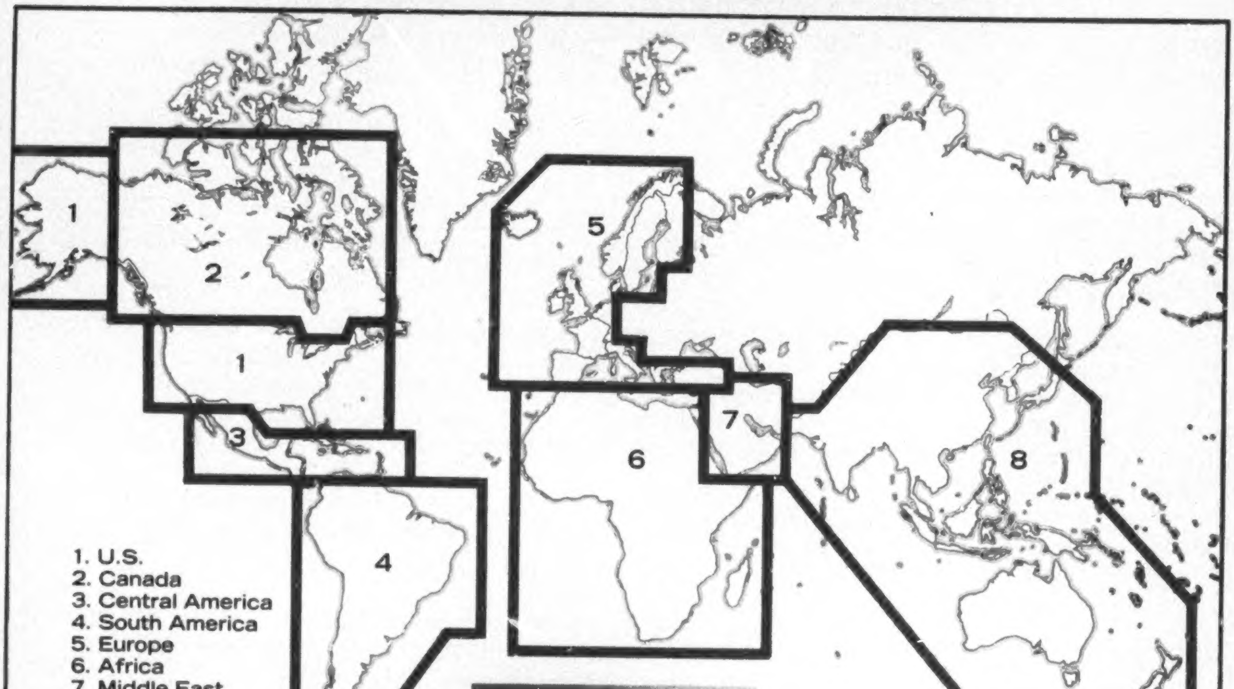

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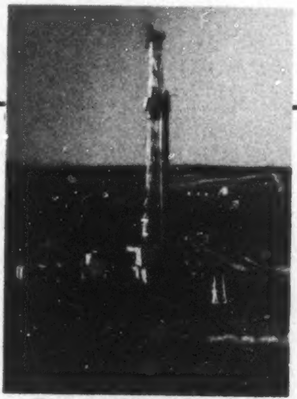

Drilling in West Texas. (Photo courtesy of Diamond Shamrock Corp.)

For over a quarter century, drilling contractors have given this magazine Rig Locator data, providing operators who let drilling contracts with mechanical specifications and locations of contract rotary rigs throughout the world. Since the Rig Locator's 1955 origin, other organizations periodically attempt similar concepts, while others shuffle and republish PEI Rig Locator data. This Rig Locator, detailing 4,721 land rigs, is the most complete presentation of contract drilling rigs ever published.

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Bethlehem Supply Co.	**Beth**
Bucyrus-Erie Co.	**B-E**
Cabot Corp Machinery Div.	**Cbot**
Cardwell Mfg. Co.	**Crdw**
Challenger	**Chal**
Continental Emsco	**C-E**
Cooper Mfg. Corp.	**Coop**
DeMag Mfg. Co.	**DeMg**
Ellis-Williams	**E-W**
Ewbank Mfg. Div. Inc.	**Ewb**
George E. Failing Co.	**Fail**
Foramines	**Fora**
Gardner-Denver	**G-D**
Hacker Machine & Supply Co.	**Hack**
Haniel & Lueg	**H-L**
Hooper Machine Works Inc.	**Hoop**
Houston Systems	**HS**
Howard-Turner Machine Works	**HT**
Ideco Inc.	**Idco**
Ingersoll-Rand Co.	**I-R**
Joy Mfg. Co.	**Joy**
Justiss-Mears Oil Co.	**J-M**
Lee, Harold Engineering	**Lee**
Mayhew Supply Co Inc.	**May**
Mid-Continent Supply	**MC**
National Supply Co.	**Nat**
OIME	**OIME**
Oilwell Div. (U.S. Steel)	**Olwl**
OPI Pump Div.	**OPI**
Quincy Mfg.	**Quin**
Salzgitter Maschinen Mfg. Co.	**Salt**
Skytop/Brewster	**S/B**
Spencer-Harris Machine & Tool Co.	**S-H**
Superior	**Sup**
Tri Service Mfg. Co.	**TSM**
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Walker-Neer Mfg. Co. Inc.	**W-N**
Weiss Corp.	**Weis**
Wheland Co.	**Whln**
Wichtex Machinery Co. Inc.	**Wich**
Wilson Mfg. Co. Inc.	**Wils**
Worth Co.	**Worth**

Drilling Outlook...

by Steve Moore, Drilling Editor

The drilling industry is climbing out of its prolonged slump, raising the hopes of better days ahead. The increase in the U.S. active rotary rig count during the last few months is welcome news, as is the growing number of active seismic crews and drilling permits.

The U.S. rig count reached 2,168, according to Hughes Tool Co., the largest number since mid-February. After bottoming out in April at 1,807 rigs, the count has increased by more than 20%. Most industry analysts expect a continuance through the end of the year--a count of 2,600 to 2,700 by December is feasible.

Seismic activity keeps picking up. The seismic land crew count bounced back to 428 in June, the latest available number, after dropping to 402 crews in February--the lowest number since September 1979.

The number of drilling permits issued also is up. After falling to a 3-year low of 4,331 drilling permits issued in a 13-state area during February, permits soared to 6,123 in July.

Still, prospects for some contractors haven't improved much. With rig utilization rates below 50% and contract bids hovering around the break-even point, cash-starved contractors find themselves in the same predicament as 6 months ago.

The big problem is the number of domestic rigs available. Supply simply outstrips demand and will continue for the short term. As a result, contractor bidding remains fierce, if not suicidal.

Many contractors are permanently stacking rigs until pricing incentives improve. Their reasoning: why work a rig at a loss? Other contractors are cannibalizing rigs for spare parts or are sending rigs overseas.

Banks are complicating matters by allowing insolvent contractors to delay bankruptcy proceedings. So far, few of the larger financial institutions have been willing to let a contractor with $100 million in loans go under. For smaller banks, contractors with service debt on two or three rigs are just as important to their loan portfolios, so these contractors are escaping foreclosures, too.

But more banks will be forced to take action with rig utilization and contract bids remaining low. By next summer, expect significantly fewer contractors to be operating.

Silver lining behind the gloom--with fewer rigs available, the industry will find demand catching up with supply more quickly. In turn, contractors will find improved pricing for their services. As profitability returns, contractors will be more inclined to refurbish rigs and buy new equipment.

Canada's rig count stands at 252, rising steadily from 76 active rigs in May. It's a far cry from when the Canadian rig count topped 440 rigs in August 1980, but the count has doubled from a year ago. Canadians who brought rigs to the U.S. in 1980 are trucking them back across the border as activity picks up.

On the international front, contractors haven't seen as much fluctuation in demand--the international rig count is off only 20% from 1982. Contracts are expiring and contractors face some touchy renegotiations, but activity shouldn't dip too much.

A problem may arise as more U.S. contractors look to the international market for relief. The result could mean a substantial drop in the utilization rate of the international rig fleet during the coming year.

The drilling outlook remains shaky but improving as more rigs go back to work. Next year the industry will face a certain spring slump, but until then contractors will find more holes to drill at a better price.

Petroleum Engineer® INTERNATIONAL

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ALANCO DRILLING CO PO Box 1970 Alice TX 78332 512-664-2388
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ALDEBARAN DRILLING CO 453 S Webb Rd PO Box 18611 Wichita KS 67207 316-685-5372
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JFP WELL SERVICE INC 13231 Champion Forest Dr Ste 210 Houston TX 77069 713-893-4464
JHJ DRILLING CO 333 North Belt East Ste 620 Houston TX 77060 713-999-4980
JAY-LAN CORP 207 W 12th St Hays KS 67601 913-628-1316
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JOHNSON-BATES DRILLING CO PO Box 128 Konawa OK 74849 405-925-3256
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M G F DRILLING CO-MIDLAND PO Box 6370 Midland TX 79701 915-563-4850
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MURFIN DRILLING CO 617 Union Center Bldg Wichita KS 67202 316-267-3241
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TRIAD DRILLING Div UGI Development Co Grand Centre Bldg Ste 310 5400 N Grand Blvd Oklahoma City OK 73112
TRIGG DRILLING CO PO Box 18605 Oklahoma City OK 73154 405-528-4456
TRUE DRILLING CO PO Drawer 2360 Casper WY 82602 307-237-9301
TUCKER DRILLING CO PO Box 1876 San Angelo TX 76901 915-655-6773
TWIN ARROW INC Box 948 Rangely CO 81648 303-675-8226

U

U R C DRILLING CORP 4141 Northwest Expy Oklahoma City OK 73116 405-842-1039
UNDERWATER GAS DEVELOPERS LTD PO Box 428 Port Colborne Ontario L3K 1B7 Canada 416-894-1731
UNDERWOOD OIL WELL SERV INC Ouachita National Bank Bldg Ste 808 Monroe LA 71201 318-388-0385
UNION DRILLING INC PO Drawer 40 Buckhannon WV 26201 304-472-4610
UNIT DRILLING & EXPL CO 1101 Petroleum Club Bldg Tulsa OK 74119 918-582-9595
UNITED DRILLING DIV BALTIC DRILLING (TX) INC Hwy 155 N Rte 1 Box 294 Tyler TX 75708 214-877-3411

V

VAUGHN GOOD DRILLING INC PO Box 3744 Enid OK 73702 405-233-3899
VECO DRILLING INC 2457 Industrial Blvd PO Box 1705 Grand Junction CO 81501 303-242-6912
VENTURE DRILLING CO 848 E Main PO Box 1353 Cushing OK 74023 918-225-3269
VERNA CORP PO Box 952 Odessa TX 79760 915-381-6910
VI-ROI DRILLING CO PO Box 1624 Duncan OK 73533 405-255-9750
VIERSEN & COCHRAN DRILLING CO PO Box 19227 Oklahoma City OK 73144 405-681-6611
VISTA DRILLING CO 700 American Tower Shreveport LA 71101 318-227-8342

W

W E K DRILLING CO PO Box 1498 Roswell NM 88201 505-623-5070
W E S CORP PO Box 1329 Park City UT 84060 801-640-8212
W W CORP 220 N Main St Madisonville KY 42431 502-821-0087
EARL F WAKEFIELD INC 300 W Douglas Ste 500 Wichita KS 67202 316-264-2386
WARREN INTERSTATE DRILLING CO 906 Utica Tower Tulsa OK 74104 918-749-8361
WARRIOR DRILLING CO 5801 N Broadway Ste 200 Oklahoma City OK 73118 405-840-1783
WEAL DRILLING CO PO Box 249 Hanson KY 42413-0249 502-322-3302
WES-MOR DRILLING INC PO Box 1259 Graham TX 76046 817-549-3383
WES-TEX DRILLING CO PO Box 3739 Abilene TX 79604 915-677-9121
WESTBURNE DRILLING INC 999-18th St #1860 PO Box 13079 Denver CO 80201 303-623-8800
WESTBURNE DRILLING CANADA LTD 200 535 Seventh Ave SW Calgary Alberta T2B 0Y4 Canada 403-233-6600
WESTERN WELL DRILLING INC 11299 Brighton Rd Henderson CO 80640 303-288-2247
WEST WIND DRILLING CO 1675 Broadway Ste 2260 Denver CO 80202 303-571-0215
WHEATSTATE OILFIELD SERVICES INC PO Box 329 Pratt KS 67124 316-672-7514
WHELESS DRILLING CO 920 Commercial National Bank Bldg Shreveport LA 71101 318-222-3137
WHITE & ELLIS DRILLING INC 401 E Douglas Ste 500 Wichita KS 67202 316-263-1102
E E WHITEHEAD DRILLING CONTR PO Box 1255 Drumright OK 74030 918-352-2230
WILCOX DRILLERS INC PO Box F F Natchez MS 39120 601-446-5021
WILLBROS DRILLING INC FM 1788-2 mi S I-20 PO Box 833 Rte 6 Midland TX 79701 915-563-0221
WILLIAMS DRILLING CO 1300 Main St Ste 1530 Houston TX 77002 713-652-9106
WILLIAMS DRILLING CO OF SOUTH TEXAS PO Drawer 3050 Alice TX 78332 512-668-9867
WILLIS DRILLING CO PO Box 479 Edinburg TX 78539 512-383-3886
WILSON BROS DRILLING CO 217 E Kaliste Saloom Rd PO Drawer 53628 Lafayette LA 70505 318-233-5950
LES WILSON INC PO Box 331 Carmi IL 62821 618-382-5091
WINTER DRILLING & EXPLORATION CO Rte 1 Box 11-A Nowata OK 74048 918-273-1874
WOOLF & MAGEE INC PO Box 6566 Tyler TX 75711 214-561-4051
WYOMING WELL SERV INC PO Box 340 Cody WY 82414 307-587-4249

Y

YOUNG DRILLING CO Bloomfield Hwy PO Box 717 Farmington NM 87401 505-327-5218

Z

ZENITH DRILLING CORP Fourth Financial Center Ste 505 Wichita KS 67202 316-265-6697

Petroleum Engineer® INTERNATIONAL

U.S. Contract Rotary Land Drilling Rigs

ALABAMA

• Contractor	Rig No. •	Type Power •	Total HP All Main Mud Pumps •	Drawworks Make And Model •	Total HP Available to Drawworks •	Rated Depth With 4½-in. Pipe, 100 ft. •
UNDESIGNATED						
Marion Drlg	4	dsl	2400	C-E C2	2400	250
	5	dsl	2400	Olwl M2000	2400	250
	6	dsl	3300	C-E C3	3300	300
CHOCTAW						
Bailey Drlg, Pernie	3	dsl	2000	S/B N12		180
Rapad Drlg	2	dsl	1800	C-E GB500	1200	140
CLARKE						
Helmerich & Payne Intl Drlg	72	dsl	2835	Olwl 3000M	2835	300
Penrod Drlg	106	dsl	1575	Nat 80B	1780	150
CONECUH						
Bay Drlg	2	dsl	2500	Nat 110M	2500	200
ESCAMBIA						
Chesley Pruet Drlg	14	dsl	3600	G-D 1500M	3600	250
Delta Drlg	66	d-e	2600	C-E Electrohoist II	3456	180
	93	d-e	2000	C-E D3 Type II	2592	180
Exeter Drlg Southern	26	dsl	2500	95 S/B	2500	175
JHJ Drlg	1	d-s	1300	S/B NE95A	1700	200
Penrod Drlg	19	dsl	2600	Nat 1320M	3425	250
MOBILE						
Exeter Drlg Southern	18	dsl	2600	G-D 1500	2600	250
	27	dsl	2800	G-D 1500	2800	250
Noble Drlg	25	dsl	3300	Nat 1625DE	3135	300
Penrod Drlg	6	dsl	3425	Nat 1625M6	2200	300
	7	dsl	3425	Nat 1625M6	2200	300
	9	dsl	2600	Nat 1320M	3425	250
Rapad Drlg	3	d-e	4000	G-D 1500E	2000	250
Resource Drlg	RD-22	dsl	3105	Nat 1320	3740	250
MONROE						
JHJ Drlg	6	dsl	1000	OIME SL7	1400	170
PICKENS						
Justiss Oil	39	dsl	300	J-M 6500	400	65

ALASKA

• Contractor	Rig No. •	Type Power •	Total HP All Main Mud Pumps •	Drawworks Make And Model •	Total HP Available to Drawworks •	Rated Depth With 4½-in. Pipe, 100 ft. •
ANCHORAGE						
Nabors Alaska Drlg	28-E	d-e	2000	C-E Electrohoist IIC	3700	250
Parker Drlg	122	dsl	1800	OIME SL1500	1800	180
Rowan Drlg	33	d-e	1600	Nat 1320UE		200
DEAD HORSE						
Rowan Drlg US	26	dsl	2000	Nat 110	1590	180
KENAI						
Rowan Drlg US	29	dsl	1850	Nat 110	2400	200
NORTH SLOPE						
Alaska United Drlg	WWS-1	d-e	1000	Olwl 700E	700	100
	1	d-e	2000	Olwl 840E	1500	180
	2	d-e	3200	Olwl 2000	2000	200
	3	d-e	3200	Olwl 2000E	2000	200
Nabors Alaska Drlg	1-ES	d-e	500	C-E Electrohoist CII	2400	200
	17	dsl	2000	Olwl 860	2475	190
	18-E	d-e	2000	C-E Electrohoist	3200	250
	22-E	d-e	3200	C-E IIC Electrohoist	3200	250
	25	dsl	2000	Nat 110	2475	200
	26-E	d-e	3200	C-E Electrohoist	4000	250
	27-E	d-e	3200	C-E Electrohoist	4000	250
Parker Drlg	123	dsl	1800	OIME SL1500	1800	180
	128	dsl	1400	OIME TBA2000	1400	150
	141	dsl	1800	OIME TBA2000	1800	180
	147	dsl	1400	OIME TBA2000	1400	150
	176	el	3200	OIME 2000E	2000	200
	191	dsl	3200	OIME 3000E	3000	200
	95	dsl	2600	Nat 130	3000	180
	96	dsl	2600	Nat 130	3000	200
	97	dsl	1400	Nat 80B	1400	150

ALASKA (Cont'd)

• Contractor	Rig No. •	Type Power •	Total HP All Main Mud Pumps •	Drawworks Make And Model •	Total HP Available to Drawworks •	Rated Depth With 4½-in. Pipe, 100 ft. •
NORTH SLOPE (Cont'd)						
Rowan Drlg US	34	d-e	2000	Nat 110EH Special	3000	170
	35	d-e	2000	Nat 110EH Special	3000	170
	41	dsl	3200	Nat 1320UE	3300	250

ARIZONA

• Contractor	Rig No. •	Type Power •	Total HP All Main Mud Pumps •	Drawworks Make And Model •	Total HP Available to Drawworks •	Rated Depth With 4½-in. Pipe, 100 ft. •
APACHE						
Energy Search Drlg	1	dsl	1500	Cbot 900	900	100
NAVAJO						
LLL Drlg	2	dsl	1720	Cbot 750	860	100
PINAL						
Morrow Drlg	1	dsl	1380	Cbot 1287	350	40

ARKANSAS

• Contractor	Rig No. •	Type Power •	Total HP All Main Mud Pumps •	Drawworks Make And Model •	Total HP Available to Drawworks •	Rated Depth With 4½-in. Pipe, 100 ft. •
UNDESIGNATED						
Layton Oil	8	dsl	450	Coop	300	65
COLUMBIA						
Aguila Drlg	11	mch	250	Trailer Mounted		60
Noble Drlg	E553	dsl	800	C-E A550	800	120
Shuler Drlg	5	dsl	325	Beth	350	50/ 3.5"
SH & J Drlg	1	dsl	807	Crdw O	800	100
	2	g-b	885	S/B N7	750	95
	3	dsl	807	Unit 34	350	73
Transcontinental Drlg-Magnolia	4	gas	700	C-E GB500	700	95
	54	dsl	800	Nat 50A	980	100
	7	dsl	1020	Olwl 76	1020	125
Verna Corp	21	dsl	550	MC	600	100
CONWAY						
Unit Drlg & Expl	6	dsl	600	MC U15	800	110
FAULKNER						
Arden Drlg	15	dsl	2000	OIME SL7	1000	160
FRANKLIN						
Grace Miller Drlg	103	gas	600	Nat 50	600	100
JOHNSON						
Dual Drlg	8	dsl	1250	Wils 75	750	95
Grace Miller Drlg	101	gas	450	Nat 50	450	70
	105	gas	300	S-H	145	55
	107	gas	450	MC U15	450	85
LAFAYETTE						
Helmerich & Payne Intl Drlg	79	d-s	2200	Nat 110UE	1500	200
Owen Drlg	7	dsl	1100	Idco H35	504	70
Sawyer Drlg & Serv	13	dsl	400	Wils Giant	400	90
	15	dsl	800	MC U40D	800	140
Shuler Drlg	8	dsl	475	S-H 7000	540	70
LOGAN						
Grace Miller Drlg	115	dsl	600	S-H	600	85
	119	dsl		BDW 650		120
New Prospect Drlg	1	dsl	950	S/B N46	950	120
	2	dsl	1000	S/B N75	1100	180
Unit Drlg & Expl	16	dsl	600	MC U15	800	110
MADISON						
Grace Miller Drlg	118	dsl	300	MC U34	350	70
MILLER						
Shuler Drlg	6	dsl	950	Wils SG	950	105
Transcontinental Drlg-Magnolia	5	dsl	1050	Olwl 76	1050	115
	94					
Vista Drlg	33	dsl	1000	S/B N7	1000	120
OUACHITA						
Shuler Drlg	1	dsl	325	S/B N4	350	50
POPE						
Alexander Drlg	4	dsl	450	W-N 250H40	425	70
C E C Drlg	1	dsl	1100	MC U15	800	100
Dual Drlg	6	dsl	600	C-E GB350	560	75

ARKANSAS (Cont'd)

• Contractor	Rig No. •	Type Power •	Total HP All Main Mud Pumps •	Drawworks Make And Model •	Total HP Available to Drawworks •	Rated Depth With 4½-in. Pipe, 100 ft. •
POPE (Cont'd)						
FWA Drlg	6	dsl	900	Wils 75	720	100
Grace Miller Drlg	104	gas	450	Nat 50	450	80
	116	gas	300	S-H 7000	380	75
Lanex Drlg	C-9	d-s	1600	BDW 650	650	120
Tierra Drlg	18	d-e	800	BDW 650	650	120
SCOTT						
C E C Drlg	3	dsl	1200	G-D 500	800	120
Henley Drlg	3	dsl	2475	S/B N12A	2475	250
	4	d-e	2600	C-E C2	2000	250
SEBASTIAN						
Astro Drlg	19	dsl	912	Wils Super Giant	912	125
	22	dsl	920	Beth M56	920	120
	23	dsl	1050	Cbot 2550	1040	150
Dual Drlg	5	dsl	1500	Wils Mogul	800	95
Grace Miller Drlg	106	gas	900	Nat 75	900	135
	109	dsl	1000	BDW 800		150
	112	dsl	350	S-H 6000	300	60
	114	dsl	600	Nat 50	600	100
	121	gas		S-H 7000		80
	123	dsl		BDW 800		150
UNION						
Hatcher & Son, H F	3	dsl	425	Wils Mogul 42	350	50
Shuler Drlg	4	dsl	700	C-E GB350	700	85
	7	dsl	380	S-H 6000	570	60
	9	dsl	475	S-H 7000	750	70

CALIFORNIA

• Contractor	Rig No. •	Type Power •	Total HP All Main Mud Pumps •	Drawworks Make And Model •	Total HP Available to Drawworks •	Rated Depth With 4½-in. Pipe, 100 ft. •
UNDESIGNATED						
Hunnicutt Camp Drlg	2	dsl	1520	Olwl 660	880	125
	6	d-e	4000	Nat 110	2000	180
COLUSA						
Hunnicutt Camp Drlg	3	dsl	1400	Nat CA50	640	105
Loffland Bros	232	dsl	1000	MC U15	1000	120
CONTRA COSTA						
Atlantic Oil	15	dsl	1020	Nat T32	340	75
Bawden Drlg, Peter (CA)	23	d-e	1700	C-E A800	1000	140
FRESNO						
Atlantic Oil	11	dsl	1350	Nat 80	1350	140
Montgomery Drlg	10					
	19					
GLENN						
Owens Serv, Jack	6	dsl	300	Idco H35	300	40
	8	dsl	900	Rig Equip	400	100
IMPERIAL						
Cleveland Drlg	6	d-e	2400	Nat 110UE	1500	200
Coastal Drlg	7	dsl	2000	C-E J750	825	105
Montgomery Drlg	4	dsl	2000	Olwl 96	1500	180
KERN						
Atlantic Oil	10	dsl	1020	Nat T32	370	75
	4	dsl	900	Nat 55	900	100
	5	dsl	680	Nat 50A	680	90
	8	dsl	1020	Nat T32	370	75
Barnes Core Drlg	711-D	dsl	750	HT 5500	450	55
California Prod Serv	D-1	dsl	500	Hoop GXXTA	461	40
	D-4	dsl	500	Hoop MTA	461	45
	M-17	dsl	300	Crdw K200C	308	40
	M-70	dsl	448	Idco H35CKD	424	40
	M-71					
	M-72	dsl	500	Idco H35CKD	424	40
	M-73	dsl	370	Idco H35CKD	424	40
Cardinal Drlg	27	dsl	1200	C-E GC500	1200	125
	29	dsl	800	C-E GA500	1200	100
Cleveland Drlg	1	dsl	1200	Olwl 96	1200	180
	2	dsl	600	S/B RR400	450	50
	3	dsl	1200	Nat 75CA	800	120
	4	dsl	2400	Idco Super 711E	1800	180
	5	d-e	2500	Idco Super 711	1500	180
	7	dsl	1000	Nat 75	800	120
	8	dsl	800	Idco 750	700	100
Coastal Drlg	2	dsl	900	Olwl 52T	550	75
Dahlquist Drlg	1	dsl	300	Tomson 3000	250	25
	5	dsl	300	Fail 2000	180	18
Edwards Well Serv	D30	dsl		Idco	300	

CALIFORNIA (Cont'd)

• Contractor	Rig No. •	Type Power •	Total HP All Main Mud Pumps •	Drawworks Make And Model •	Total HP Available to Drawworks •	Rated Depth With 4½-in. Pipe, 100 ft. •
KERN (Cont'd)						
Gary Drlg	D-10	dsl	628	Hoop	400	55
	D-11	dsl	600	C-E C50	600	80
	D-12	dsl	382	C-E GB160T	300	45
	D-13	dsl	450	C-E GB16T	300	40
	D-2	dsl	800	Nat T45	600	90
	D-3	dsl	628	C-E G350	600	80
	D-30	dsl	300	Idco 35		
	D-4	dsl	475	C-E GB160T	450	45
	D-5	dsl	382	Hoop GT34	300	25
	D-6	dsl	600	C-E GB160T	400	45
	D-7	dsl	381	Gary	200	20
	D-8	dsl	450	C-E GB160T	400	45
	D-9	dsl	628	Cbot	400	55
	1	dsl	450	Hoop	400	50
	14	dsl	800	Gary	640	90
	15	dsl	800	Gary	640	90
Golden State Drlg	D-10	dsl	750	Custom HT	450	55
	D-6	dsl	750	Custom HT	450	55
	D-8	dsl	750	Chal 78	450	55
Hylton Drlg	1	dsl	400	Nat T12	300	40
	4	dsl	380	HT MR10	150	30
	5	dsl	380	Idco H30	300	50
	7	dsl	300	Nat T12	380	40
	8	dsl	380	Idco H30	300	50
	9	dsl	400	Idco H30	300	50
K B Drlg & Prod	7			Coop		
Kellogg & Sons, K L	41	d-e	1000	Nat Con 75CA	700	110
Kenai Drlg West Coast	29	dsl	900	Wils Giant	1200	120
	6	dsl	850	C-E J750	800	100
Loffland Bros	125	d-e	2180	MC U914	2200	180
	328	dsl	2160	Nat 130	2400	220
	84	d-e	1290	MC U36EA	1200	100
	92	d-e	2160	MC U914CE	2200	180
	98	d-e	2000	MC U40E	1600	130
Marlin West	Marlin 11	d-s	2000	Nat 110	1600	180
	Marlin 12	d-s	2000	Nat 110	1600	180
Monterey Drlg	F	d-s	400	Idco H30E	500	80
Montgomery Drlg	12					
	14	dsl	1200	Oilwl 66	700	105
	15	d-e	2000	Nat 75CB	1000	140
	16					
	18					
	3					
	45	dsl	2000	C-E GB800	750	120
	8					
	9					
NECK Drlg	1	gas	350	Wils Super	350	40
Pyramid Oil	3	dsl	400	Idco H30	300	30
RDC/Finley	20	dsl	2400	S/B N95	1800	180
	22	dsl	1900	MC U36A	950	100
Scandinavian Montgomery Drlg	11	dsl	1500	C-E GB800	1500	120
	3	dsl	1200	Nat 75	700	120
	8	dsl	1200	Nat 75	700	120
	9	d-e	2200	Nat 1320UE	3000	220
KINGS						
Martin West	13	d-s	2000	Nat 110UE	1600	180
LAKE						
Monterey Drlg	8	d-e	1000	Nat 80B	2000	140
Montgomery Drlg	17	d-e	2000	Oilwl 940E	2000	200
	6	dsl	1400	C-E GB800	1200	130
LOS ANGELES						
Atlantic Oil	3	dsl	680	Idco H40	370	75
Bawden Drlg, Peter (CA)	10	d-e	2300	Oilwl 940E	1500	180
	18	d-e	2300	Nat 110M	1500	160
	22	d-e	1400	C-E M58	800	100
	38	d-e	1800	Oilwl 940E	1500	85
Brinkerhoff-Signal	90	dsl	4000	G-D 1500E	2000	250
California Prod Serv	D-3	dsl	300	Idco H37D	461	45
	D-6					
	D-7	dsl	1000	Hoop MTA	654	65
Kellogg & Sons, K L	40	d-e	1000	Nat 610	700	110
Kenai Drlg West Coast	24	d-e	1500	Wils Titan	1000	130
	30	dsl	975	Idco H40D	400	65
Loffland Bros	165	gas	1600	MC U914C	1900	130
Montgomery Drlg	1	d-e	3200	Nat 1320UE	3645	250
Pool Offshore	427			OIME 1500		160
RDC/Finley	11	dsl	636	Idco H30	318	35
	16	dsl	636	Idco H35	318	40
	17	dsl	1100	Cbot 1287	636	70
	21	dsl	2100	Nat 55	1200	120
	6	dsl	636	Idco H40	475	55
Thompson Drlg	2	dsl	900	C-E GA250T	450	65
MERCED						
Coastal Drlg	1	dsl	550	Crdw KM250	250	55
MONTEREY						
Brinkerhoff-Signal	8	g-b	1000	G-D 800	1000	140
Melton Drlg	3	dsl	350	W-M	350	40

CALIFORNIA (Cont'd)

• Contractor	Rig No. •	Type Power •	Total HP All Main Mud Pumps •	Drawworks Make And Model •	Total HP Available to Drawworks •	Rated Depth With 4½-in. Pipe, 100 ft. •
ORANGE						
Monterey Drlg	C	d-e	1000	Nat 100ME	1500	160
SAN BERNARDINO						
Atlantic Oil	2	dsl	1260	Nat 55	1260	110
SAN JOAQUIN						
Montgomery Drlg	43	e-s	2000	Nat 110UE	2000	200
SANTA BARBARA						
Bawden Drlg, Peter (CA)	27	d-e	1500	C-E A550E	1000	120
	50	d-m	1500	Nat 55	700	120
Big Chief Drlg	18	dsl	500	Hoop GXXTA	450	60
Kenai Drlg West Coast	4	dsl	978	Idco H40D	400	70
	5	dsl	1000	Nat T32	400	75
	8	dsl	325	W-M T5054	425	70
	9	dsl	850	Idco H40D	400	65
Loffland Bros	306	gas	1150	S/B N95	1300	170
Monterey Drlg	D	d-s	700	Nat 50A	700	100
Montgomery Drlg	2	d-e	2000	Oilwl 940E	3000	180
SOLANO						
Atlantic Oil	12	dsl	850	Nat 50A	680	90
	6	dsl	810	Nat 80	1680	140
Cleveland Drlg	11	dsl	1000	Coop D50	400	75
	12	dsl	1500	Oilwl 68	700	120
Hunnicutt Camp Drlg	1	dsl	950	Nat T32	320	90
	4	dsl	1400	Oilwl 66	640	110
Monterey Drlg	A	d-e	1000	Idco 1040E	2000	180
Montgomery Drlg	7	dsl	1200	Nat 75	700	110
Owens Serv, Jack	4	dsl	300	Idco H35	150	40
	5	dsl	300	Idco H25	300	40
SONOMA						
Brinkerhoff-Signal	87	dsl	2000	Nat 80UE	2000	260
Loffland Bros	105	d-e	2160	MC U914EC	2200	180
	25	d-e	2160	MC U914CE	2200	180
	27	d-e	2160	MC U20	2200	170
	50	d-e	1420	MC U712A	1600	170
SUTTER						
Cleveland Drlg	14	dsl	1200	Oilwl 500	800	120
TULARE						
Kenai Drlg West Coast	34	dsl	975	C-E GB350	800	90
VENTURA						
Atlantic Oil	16	dsl	1650	Nat 130	2475	200
Bawden Drlg, Peter (CA)	11	d-e	1600	C-E A800WE	1000	120
	24	d-e	1550	Nat 80E	1000	140
Kenai Drlg West Coast	7	dsl	800	MAC 400	425	70
Loffland Bros	16	dsl	1900	MC U914C	2000	180
	212	gas	2000	MC U914A	1600	180
	217	gas	1600	MC U914C	1900	180
YOLO						
Atlantic Oil	14	dsl	1020	Idco H		65
	7	dsl	1020	Nat T32	450	75
Hunnicutt Camp Drlg	5	dsl	960	Idco 525	480	90
Owens Serv, Jack	2	dsl	200	Idco H38	350	40
	7	dsl	700	Coop 350	350	40

COLORADO

• Contractor	Rig No. •	Type Power •	Total HP All Main Mud Pumps •	Drawworks Make And Model •	Total HP Available to Drawworks •	Rated Depth With 4½-in. Pipe, 100 ft. •
UNDESIGNATED						
Allison Bros Drlg	1	dsl	320	Idco BIR800	920	100
	2	dsl	380	Crdw KB500	380	75
	7	dsl	475	Idco BIR800	950	100
Allison Drlg	15	dsl	720	S/B N7	720	100
	25	gas	435	G-D 500	435	100
	3	dsl	380	Crdw KB500	380	75
ADAMS						
Exeter Drlg Northern	12	dsl	500	Nat T45	750	95
	14	dsl	375	Beth C50	600	78
	23	dsl	500	MC U15	750	87
	25	dsl	375	MC U15	500	85
Western Well Drlg	1	dsl	350	Midway 2000	350	25
	2	dsl	350	Fall H2000	350	35
	3	dsl	350	Fall	350	40
ARAPAHOE						
Exeter Drlg Northern	6	dsl	330	Nat T20	300	60
ARCHULETA						
Energy Search Drlg	2	dsl	1500	Cbot 900	900	100

COLORADO (Cont'd)

• Contractor	Rig No. •	Type Power •	Total HP All Main Mud Pumps •	Drawworks Make And Model •	Total HP Available to Drawworks •	Rated Depth With 4½-in. Pipe, 100 ft. •
BACA						
Zenith Drlg	1	dsl	700	S/B N75	700	95
BENT						
Gibson Well Serv, J W	93	dsl	450	Cbot M1287	450	60
DOLORES						
Coleman Drlg	2	dsl	1100	Idco H40D	636	80
Nicor Drlg	36	dsl	1150	G-D 500	650	110
ELBERT						
Toltek Drlg	2	dsl	680	Nat 50A	875	105
GARFIELD						
Atco Drlg	3			S/B N4		60
Cardinal Drlg	2	dsl	864	C-E GA500	760	100
KIOWA						
Murfin Drlg	12	dsl	400	Beth C50	600	75
KIT CARSON						
Murfin Drlg	23	dsl	375	Idco 35	475	65
LA PLATA						
Arapahoe Drlg	7	g-b	700	Nat T45	700	100
Brinkerhoff-Signal	76	dsl	800	G-D M500	800	100
LARIMER						
Exeter Drlg Northern	22	dsl	500	MC U15	750	95
LINCOLN						
Murfin Drlg	14	dsl	400	Nat T45	700	90
	25	dsl	600	Nat 370	600	75
LOGAN						
Excell Drlg	2	dsl	375	671 GMC	210	33
	3	dsl	400	Fall 100	400	55
	4	dsl	230	Ewb M75	230	20
Exeter Drlg Northern	13	dsl	350	S/B N4	300	60
MESA						
Loffland Bros	12	dsl	840	Idco Hydrair H44CSC	868	100
Nicor Drlg	37	dsl	850	Fall LC90	340	70
	38	dsl	750	Wils 75	640	90
	39	dsl	750	Nat D300	300	55
	44	d-e	1500	G-D 500E	650	110
Tierra Drlg	16	dsl	650	S/B 4810	750	75
Veco Drlg	1	dsl	400	Fall 90	400	50
	5	dsl	1400	OIME 750	750	110
	6	dsl	1400	OIME 750	750	110
	7	dsl	1550	OIME 1000	1000	160
	8	dsl	800	S/B 45	750	100
	9	dsl	1200	Idco 725	750	110
MOFFAT						
Atco Drlg	5	dsl	326	Nat T32	326	75
	56	d-e	1800	Nat 80UE	1800	150
Brinkerhoff-Signal	79	dsl	550	Nat 370	800	85
Shelby Drlg	5	dsl	360	Coop LTO550	450	75
MONTEZUMA						
Dual Drlg	34	dsl	2000	C-E D3	1000	160
Loffland Bros	26	d-e	2000	MC U36	1600	110
	29	d-e	1400	MC U36A	1600	110
Mesa Drillers	1	dsl	600	Nat 50A	750	80
MONTROSE						
Loffland Bros	5	dsl	1220	Idco H1000	868	120
MORGAN						
Gibson Well Serv, J W	75	dsl	450	Crdw K8500	450	80
	98	dsl	700	Sup	700	100
RIO BLANCO						
Cardinal Drlg	4	dsl	560	C-E GB350T	760	85
Manning, R L	11	dsl	720	Nat 370	720	85
	19	dsl	925	Beth M58	980	100
	24	dsl	860	S/B N75	980	110
Parker Drlg	56	dsl	1000	OIME SD5	1000	125
Twin Arrow	309	dsl		S/B	575	60
ROUTT						
Atco Drlg	18	dsl	326		320	75
Nicor Drlg	43	d-e	1500	G-D 500E	650	110
WASHINGTON						
Toltek Drlg	4	dsl	440	MC U34	440	75
WELD						
Burris Drlg	119	dsl	450	MAC 400	500	105
Exeter Drlg Northern	1	dsl	500	Nat 50A	750	95

COLORADO (Cont'd)

• Contractor	Rig No. •	Type Power •	Total HP All Main Mud Pumps •	Drawworks Make And Model •	Total HP Available to Drawworks •	Rated Depth With 4½-in. Pipe, 100 ft. •
WELD (Cont'd)						
Exeter Drig Northern	2	dsl	375	C-E GA250	460	75
	33	dsl	500	MC U15	750	85
	4	dsl	375	Nat T32	460	78
	40	dsl	500	MC U15	750	95
	5	dsl	300	MC U34D	300	60
Grace-Bomac Drig	93	d-e	3200	Nat 1320UE	2000	250
True Drig	19	dsl	1000	Nat 50A	1000	120
	26	dsl	900	Idco H725SC	900	100
	27	dsl	900	Idco H725SC	900	100

FLORIDA

• Contractor	Rig No. •	Type Power •	Total HP All Main Mud Pumps •	Drawworks Make And Model •	Total HP Available to Drawworks •	Rated Depth With 4½-in. Pipe, 100 ft. •
COLLIER						
Penrod Drig	108	dsl	1000	Nat 80B	1760	150
SEE Land Drig	14	dsl	1500	RMI	1000	150
ESCAMBIA						
Tesoro Drig	2	dsl	2600	Nat 1320M	2742	200
OKALOOSA						
Murco Drig	18	dsl	2800	MC U1220	2400	250
SANTA ROSA						
Dual Drig	22	dsl	3200	Nat 1320M	2000	220
Murco Drig	14	d-s	3200	G-D 1500	2800	250
Penrod Drig	15	dsl	3000	G-D 2100	2200	300
TAYLOR						
Justiss Oil	11	dsl	1200	C-E GB800	1600	140

IDAHO

• Contractor	Rig No. •	Type Power •	Total HP All Main Mud Pumps •	Drawworks Make And Model •	Total HP Available to Drawworks •	Rated Depth With 4½-in. Pipe, 100 ft. •
CARIBOU						
Loffland Bros	57	d-e	1800	Nat 80B	2000	160

ILLINOIS

• Contractor	Rig No. •	Type Power •	Total HP All Main Mud Pumps •	Drawworks Make And Model •	Total HP Available to Drawworks •	Rated Depth With 4½-in. Pipe, 100 ft. •
CLAY						
Precision Expl	5	dsl	400	Nat T12	385	45
CLINTON						
Mitchell Drig, Geo N	4	dsl	400	S/B N4	400	60
CRAWFORD						
Nicor Drig	54	d-m	400	Idco H35CKD	500	43
EDWARDS						
Harris Drig	1	dsl	500	Nat T12	360	40
Mitchell Drig, Geo N	6	dsl	400	Wils Super 38	400	60
Smith Drig	11	dsl	450	Nat T20	480	60
	3	dsl	375	Nat T12	375	50
Wilson Inc, Les	17	dsl	500	Idco H37	550	60
HAMILTON						
Precision Expl	2	dsl	400	Nat T20	400	55
Ram Drig	1	dsl	1800	Idco HD35	1800	60
JASPER						
Precision Expl	3	dsl	400	Nat T16	400	55
LAWRENCE						
Smith Drig	8	dsl	350	Chal M280	380	45
MARION						
Mitchell Drig, Geo N	7	dsl	400	Idco H35	400	65
RICHLAND						
Precision Expl	1	dsl	400	Nat T20	400	55
Smith Drig	9	dsl	320	Nat T12	320	40
SALINE						
Mitchell Drig, Geo N	5	dsl	400	S/B N4	400	60
WABASH						
Beard Drig (IL)	1	dsl	400	Nat T12	350	45
Smith Drig	2	dsl	350	Nat T8	238	25
WASHINGTON						
Oelze, Elmer Jr	1	dsl	475	Lee 650	475	85
	2	dsl	475	W-N 25040	380	60
	3	dsl		W-N S34A	160	50
	4	gas		Crdw HL	140	40
WAYNE						
Barr Drig	1	dsl	378	Nat T12	286	50

ILLINOIS (Cont'd)

• Contractor	Rig No. •	Type Power •	Total HP All Main Mud Pumps •	Drawworks Make And Model •	Total HP Available to Drawworks •	Rated Depth With 4½-in. Pipe, 100 ft. •
WAYNE (Cont'd)						
Gallagher Drig	4	dsl	500	Beth S45E	476	60
Mitchell Drig, Geo N	9	dsl	600	G-D 500M	600	90
Precision Expl	4	dsl	400	Nat T20	400	55
Wilson Inc, Les	15	dsl	500	Idco H35	400	50
WHITE						
Gallagher Drig	5	dsl	300	Nat T12	310	35
	7	dsl	350	Nat T20	475	50
	8	dsl	350	Nat T12	450	40
Harris Drig	4	dsl	500	Nat 50	360	60
Lohmann Inc, J Roy	21	dsl		Nat T12		40
Mitchell Drig, Geo N	1	dsl	400	Beth SN45	400	60
P E P Drig	6	dsl	550	Idco H35S	350	65
Snyder Drig Well Serv	1	dsl	400	S/B 55	400	65
	2	dsl	400	Beth 545	400	60
Wilson Inc, Les	12	dsl	500	Idco H35	400	50

INDIANA

• Contractor	Rig No. •	Type Power •	Total HP All Main Mud Pumps •	Drawworks Make And Model •	Total HP Available to Drawworks •	Rated Depth With 4½-in. Pipe, 100 ft. •
GIBSON						
Big Seven Drig	7	dsl	450	C-E GB250	400	60
Davis Drig, D L	1	dsl	300	Wils Mogul 38	300	35
Lightning Drig & Constr	2	dsl	300	Dresser T70W	300	32
Ram Drig	3	dsl	360	Nat T12	360	40
Smith Drig	7	dsl	450	G-D 2500	350	35
PERRY						
J-V Drig	8	dsl	145	Speedstar SS15S	145	16/ 3.5"
POSEY						
Kendall Drig	2	dsl	450	S/B N4	350	55
Lohmann Drig	9	dsl	300	Nat T12	300	35
Ram Drig	2	dsl	1800	Nat T12	1800	50
VANDERBURGH						
J-V Drig	6	dsl	145	Speedstar SS15S	145	16/ 3.5"
	9	gas	85	Cbot F	85	600/ 2.88"
WARRICK						
Gwaltney Drig	1	dsl	300	Nat T12	225	30

KANSAS

• Contractor	Rig No. •	Type Power •	Total HP All Main Mud Pumps •	Drawworks Make And Model •	Total HP Available to Drawworks •	Rated Depth With 4½-in. Pipe, 100 ft. •
UNDESIGNATED						
Allen Drig	3	dsl	525	Idco H30	425	50
Edco Drig	1	dsl	375	Sullivan 300A	318	30
	2	dsl	375	Sullivan 300	375	30
	3	dsl	125	Crdw J101	235	750
	4	dsl	125	Davey	235	750
	5	dsl	475	Crdw KB200	375	45
	6	dsl	375	Crdw KB150	318	35
Husky Drig	2	dsl	350	Idco H35	650	80
Reins & Williamson Oil	11	dsl	300	S/B	500	45
Wakefield, Earl F	1	dsl	440	MC U34	440	50
	7	dsl	640	C-E GB160T	640	50
Zenith Drig	2	dsl	600	C-E GB350	600	85
	4	dsl	1100	MC U15	1100	120
	6	dsl	600	C-E GB350	600	85
	8	dsl	600	C-E GB350	600	85
	9	dsl	1200	G-D 800	1200	170
BARBER						
FWA Drig	32	dsl	600	Wils Mogul 42	375	60
Graves Drig	1	dsl	300	S/B N4	400	60
Heartland Drig	1	dsl	500	Idco H35S	650	65
H30 Drig	5	dsl	510	Idco H35	510	65
Slawson Drig	5	dsl	360	Idco H525	480	75
Sterling Drig (KS)						
BARTON						
Abercrombie Drig	10	dsl	365	Cbot Tri Mtd	220	45
	11	dsl	600	C-E 350	700	75
Allen Drig	1	dsl	400	Nat T32	425	60
	4	dsl	350	Nat T20	425	45
Bergman Drig	1	dsl	350	C-E	350	55
H30 Drig	7	dsl	280	MC Mac400	312	80
Lauck Oil, D R	2	dsl	350	S/B N45	400	60
Peters Drig	8	dsl	250	Crdw DB200	250	60
Red Tiger Drig	4	dsl	700	C-E Gas 250	700	55
White & Ellis Drig	10	dsl	410	Beth S45E	410	50
	2	dsl	425	C-E GA250	475	45
BUTLER						
Brandt Drig	3	dsl	350	W-N R4	330	35
McAllister Drig	1	dsl	280	Idco H30	312	55

KANSAS (Cont'd)

• Contractor	Rig No. •	Type Power •	Total HP All Main Mud Pumps •	Drawworks Make And Model •	Total HP Available to Drawworks •	Rated Depth With 4½-in. Pipe, 100 ft. •
BUTLER (Cont'd)						
White & Ellis Drig	3	dsl	345	Nat T12	345	45
	4	dsl	300	C-E GA250	300	50
	5	dsl	300	C-E GA150	475	40
CHAUTAUQUA						
Range Drig	2	dsl	350	Wils Giant	350	55
CLARK						
Eagle Drig	1	dsl	600	Nat 370	650	70
H30 Drig	3	dsl	280	Idco H40	312	80
Murfin Drig	22	dsl	600	Nat 370	600	75
Pickrell Drig	10	dsl	370	MC U15	370	55
Rine Drig	8	dsl	700	S/B N55	700	85
TMBR Drig	31	dsl	600	MC U15	500	70
COMANCHE						
Aldebaran Drig	2	dsl	525	Nat T32	500	72
COWLEY						
Cardinal Drig	34	dsl	400	C-E GB160	400	45
Range Drig	3	dsl	350	MC U10A	350	55
EDWARDS						
Damac Drig	1	dsl	310	Wils Giant	310	60
Murfin Drig	19	dsl	525	Wils Super Mogul 42	525	65
ELLIS						
Big Springs Drig	3	dsl	450	S/B N4	450	50
Buffalo Drig Co	7	dsl	360	S/B N4	460	55
Buffalo Drig Inc	1	dsl	500	S/B N4	400	60
Gabbert-Jones	8	dsl	450	Nat T32	450	60
H30 Drig	2	dsl	280	MAC 400	312	80
Jay-Lan Corp	3	dsl	3406	Wils 42	825	60
KANDRILCO Inc	1	dsl	375	C-E GA250T	475	55
Red Tiger Drig	9	dsl	700	MC U10	700	60
Wheatstate Oilfield	3	dsl	340	C-E 250	425	50
ELLSWORTH						
Rockhold Engr	3	gas		Crdw RL	150	
White & Ellis Drig	9	dsl	410	S/B N46	750	105
FINNEY						
Cheyenne Drig	1	dsl	450	Olwl 52T	525	65
Reins & Williamson Oil	2	dsl	450	Olwl 52-T	450	67
FORD						
Dunne-Gardner Petr	1	dsl	350	C-E 250	450	50
GARY						
Leben Drig	11	dsl	500	G-D 3000	500	70
GOVE						
Red Tiger Drig	10	dsl	700	TSM 6000	700	70
Strata Drig	1	dsl	500	MC U15	800	75
GRAHAM						
Abercrombie Drig	9	dsl	365	Beth Breeze	365	55
Big Springs Drig	1	dsl	360	Beth S4513	360	50
Farmer, John O	4	dsl	400	Idco H30	400	60
GREELEY						
Cheyenne Drig	5					
GREENWOOD						
Berentz Drig	3	dsl	440	Nat T12	500	38
HARPER						
Big Springs Drig	2	dsl	360	Nat T32	360	55
Gabbert-Jones	6	dsl	450	Nat T32	310	60
R R A Inc	1	dsl	335	Coop 350	325	65
Sweetman Drig	1	dsl	750	Nat 370	750	90
Wheatstate Oilfield	2	dsl	450	Mini-Max 15	450	65
HODGEMAN						
Beredco	2	dsl	525	Nat 370	575	70
DNB Drig	2	dsl	500	Nat T32	525	65
Peters Drig	4	dsl	250	Crdw RL	250	60
White & Ellis Drig	8	dsl	410	C-E 350	750	75
KINGMAN						
Brandt Drig	2	dsl	350	Nat 370	600	75
KANDRILCO Inc	2	dsl	375	MAC 400	475	55
Reins & Williamson Oil	3	dsl	525	Crdw J350	525	67
KIOWA						
Abercrombie Drig	6	dsl	365	Idco H35	365	60
Aldebaran Drig	3	dsl	525	Idco	600	72
Gabbert-Jones	9	dsl	310	Nat T32	450	60
Red Tiger Drig	1	dsl	700	MC U15	700	60
LANE						
Abercrombie Drig	1	dsl	365	MC U34	365	50

KANSAS (Cont'd)

• Contractor	Rig No. •	Type Power •	Total HP All Main Mud Pumps •	Drawworks Make And Model •	Total HP Available to Drawworks •	Rated Depth With 4½-in. Pipe, 100 ft. •
LANE (Cont'd)						
Beredco	3	dsl	500	MC U15	800	75
Murfin Drlg	16	dsl	400	C-E S45E Beth	400	60
Slawson Drlg	6	dsl	360	Idco H525	480	75
LOGAN						
Abercrombie Drlg	5	dsl	750	Idco 725	600	100
Slawson Drlg	3	dsl	480	Idco H35	480	70
McPHERSON						
Blackstone Drlg	3	dsl	300	BDW 450T	300	50
MARION						
Kansas Drlg & Well Serv	1	dsl	365	Cbot 1058	300	40
	2	dsl	265	Coop 4242	235	20
	4	dsl	750	KREMCO K600	500	70
	5	dsl	750	Crdw KB200C	400	60
MEADE						
Damac Drlg	8	dsl	310	Idco H35S	450	75
Sage Drlg	2	dsl	400	Olwl T52	400	67
MONTGOMERY						
Layton Oil	1	dsl	150	Wils DBL	100	15
	2	dsl	180	Fall 1500	100	15
MORTON						
Gabbert-Jones	11	dsl	310	Nat 370	450	60
Sage Drlg	1	dsl	400	Nat T32	400	65
NEMAHA						
Brandt Drlg	1	dsl	350	Beth S50	450	50
Hamm Drlg	1	dsl	400	W-N Apache	425	60
McAllister Drlg	2					
NEOSHO						
Carter Land & Cattle	1	dsl	250	G-D 1000	350	10
	2	dsl	250	G-D 1000	350	10
NESS						
Abercrombie Drlg	7	dsl	365	MC U34	365	50
Aldebaran Drlg	1	dsl	525	S/B N42	600	72
H30 Drlg	11	dsl	280	Idco H30	312	55
Slawson Drlg	2	dsl	360	Idco H525	480	75
OSBORNE						
Red Tiger Drlg	8	dsl	700	C-E GA250T	700	55
PHILLIPS						
Abercrombie Drlg	4	dsl	365	Idco H35	365	85
Red Tiger Drlg	7	dsl	700	C-E GA250T	700	55
PRATT						
DNB Drlg	3	dsl	450	Nat T20	350	50
Freeman Drlg	1	dsl	525	Idco H40	600	85
Lauck Oil, D R	1	dsl	350	MC U15	400	60
Leben Drlg	7	dsl	500	G-D 3000	500	70
Pickrell Drlg	1	dsl	450	MC U15	450	65
Red Tiger Drlg	6	dsl	700	Idco H35	700	60
Trans-Pac Drlg	1	dsl	500	Idco H35SC	650	65
Wheatstate Oilfield	1	dsl	340	Idco H35	525	60
Zenith Drlg	7	dsl	550	S/B N4	500	70
RAWLINS						
Murfin Drlg	24	dsl	525	Idco H35	475	65
Stoeppelwerth Drlg	3	dsl	500	Nat 370	500	65
RENO						
Blackstone Drlg	4	dsl		BDW	450T	40
Sterling Drlg (KS)	1	dsl	350	MC U34	285	48
RICE						
Allen Drlg	2	dsl	350	Idco H25	425	45
Damac Drlg	7	dsl	385	S/B N4	385	60
J W Drlg	1	dsl	380	MC U15	380	60
Red Tiger Drlg	3	dsl	700	Idco H35	700	55
Sterling Drlg (KS)	2	dsl	350	MC RV34B	285	48
	5	dsl	350	C-E GB350	600	70
	8	dsl	350	G-D 2000	350	28
ROOKS						
Galloway Drlg	1	dsl	300	Nat T32	300	50
Murfin Drlg	15	dsl	400	Idco H35	475	65
Red Tiger Drlg	2	dsl	700	C-E GA250	700	55
RUSSELL						
Duke Drlg	1	dsl	375	MC	375	50
	2	dsl	250	Nat	250	50
Rains & Williamson Oil	9	dsl	300	Beth	300	45
Red Tiger Drlg	5	dsl	700	Unit U15	700	60
Shields Drlg	2	dsl	300	Beth C50	300	55

KANSAS (Cont'd)

• Contractor	Rig No. •	Type Power •	Total HP All Main Mud Pumps •	Drawworks Make And Model •	Total HP Available to Drawworks •	Rated Depth With 4½-in. Pipe, 100 ft. •
SALINE						
Rains & Williamson Oil	4	dsl	400	S/B N4	450	55
Range Drlg	1	dsl	360	Cbot SAL4500	440	35
SCOTT						
Slawson Drlg	1	dsl	360	Idco H35	360	55
SEDGWICK						
Duke Drlg	3	dsl				
White & Ellis Drlg	7	dsl	300	MC U34	475	40
SEWARD						
Bohannan Drlg, J B	1	dsl	950	Idco 725	750	100
Gabbert-Jones	12	dsl	450	S/B N42	525	80
Lanex Drlg	C-8	d-s	1600	BDW 650	650	120
N R G Drlg	1	dsl	560	Wils Mogul 42	560	70
Rains & Williamson Oil	5	dsl	400	Idco H40	525	70
Tierra Drlg	17	d-e	800	BDW 650	650	120
SHERIDAN						
Abercrombie Drlg	8	dsl	365	Beth S50	365	55
Dunne-Gardner Petr	2	dsl	400	Idco H35	450	70
Murfin Drlg	21	dsl	375	Idco H35	475	65
STAFFORD						
Allen Drlg	5	dsl	525	Nat 370	600	70
L D Drlg	1	dsl	410	Beth S45A	300	45
Rockhold Engr	7	gas		W-N	200	
STEVENS						
Triad Drlg	1	dsl		Nat T32	475	80
SUMMER						
Slawson Drlg	4	dsl	6500	Idco H35	360	75
THOMAS						
Murfin Drlg	2	dsl	400	Nat T32	400	60
TREGO						
Abercrombie Drlg	12	dsl	385	Beth Freeze	300	55
Murfin Drlg	8	dsl	400	Nat T20	400	50
WICHITA						
Cheyenne Drlg	4	dsl	600	Nat 370	600	85

KENTUCKY

• Contractor	Rig No. •	Type Power •	Total HP All Main Mud Pumps •	Drawworks Make And Model •	Total HP Available to Drawworks •	Rated Depth With 4½-in. Pipe, 100 ft. •
UNDESIGNATED						
Royco Drlg	1	dsl	300	Crdw	335	55
	2	dsl	300	G-D 3000	200	50
DAVIESS						
Crescent Drlg	7	dsl	1200	Beth Toro	1200	120
HENDERSON						
Big Seven Drlg	11	dsl	360	C-E GB160	335	40
Crescent Drlg	4	dsl	400	Beth S45	400	40
Kendall Drlg	3	dsl	450	S/B N4	300	55
Lightning Drlg & Constr	1	dsl	325	Idco 20	400	38
Lohmann Inc, J Roy	6	dsl	600	Nat 50	600	65
HOPKINS						
Kendall Drlg	1	dsl	450	Nat T12	300	40
W W Corp	1	dsl	450	G-D 3000	450	50
Weal Drlg	1	dsl	325	Nat T12	360	40
MUHLENBERG						
Crescent Drlg	8	dsl	400	Beth S45	400	50
UNION						
Mitchell Drlg, Geo N	8	dsl	400	MAC 300	300	42
WEBSTER						
Weal Drlg	2	dsl	335	Crdw S	335	40

LOUISIANA

• Contractor	Rig No. •	Type Power •	Total HP All Main Mud Pumps •	Drawworks Make And Model •	Total HP Available to Drawworks •	Rated Depth With 4½-in. Pipe, 100 ft. •
UNDESIGNATED						
American Well Serv & Drlg	14	dsl	1700	S/B HI4610A	575	105
	15	dsl	1700	S/B DH14610	900	120
Butler-Johnson	1	dsl	1900	S/B N85	1900	150
	10	dsl	1500	G-D M800	1500	140
	13	dsl	1200	S/B N75B	1200	130
	15	dsl	1000	Nat 80B	1950	150
	3	g-b	1200	C-E A550	1200	135

LOUISIANA (Cont'd)

• Contractor	Rig No. •	Type Power •	Total HP All Main Mud Pumps •	Drawworks Make And Model •	Total HP Available to Drawworks •	Rated Depth With 4½-in. Pipe, 100 ft. •
UNDESIGNATED (Cont'd)						
Butler-Johnson	4	dsl	1200	S/B N75	1200	125
	5	dsl	1800	S/B N95	1800	200
	6	dsl	2000	S/B N85	1900	150
	8	dsl	2300	G-D 1500	2200	200
	9	dsl	1200	G-D 700	1200	120
Harris Well Serv	17	dsl	316	Idco H35	316	75
	18	dsl	316	Idco H35	316	75
	19	dsl	316	Idco H35	316	75
	21	dsl	316	Idco H35	316	75
	22	dsl	316	Idco H35	316	75
	23	dsl	316	Idco H37	480	80
	24	dsl	316	Idco H35	316	75
	25	dsl	632	Idco H44	632	100
	26	dsl	632	Idco H44	750	100
	27	dsl	316	Idco H35	316	75
	28	dsl	316	Idco H35	316	75
	29	dsl	316	Idco H35	316	75
	30	dsl	2000	Idco 1200	1400	135
	31	dsl	316	Coop LTD350	316	75
	32	dsl	316	Idco H35	316	75
	33	dsl	900	Idco H44	900	100
NL Well Serv	267	dsl	700	Cbot 2042	800	75
	268	dsl	300	Cbot 1287	456	50
	277	dsl				
Santa Fe Drlg	120	d-e	3400	C-E C311E	3000	250
ACADIA						
Bailey Drlg, Pernie	5	dsl	1500	Nat 55	1100	120
Comet Drlg	10	dsl	1700	Cbot 900	900	105
	4	dsl	1700	S/B N75	900	120
	6	dsl	2550	Idco Super 7-11	1700	180
Delta Drlg	16	dsl	2600	Nat 130	2250	250
	96	d-e	2800	C-E C1 Type II	3456	200
Glasscock Drlg	69	dsl	2700	Nat 1320	2700	200
Great Southern Oil & Gas	5	dsl	500	Wils	318	70
Grey Wolf Drlg	10	dsl	2000	C-E C1	2000	180
Nicklos Drlg	28	d-e	3000	C-E Electrohoist III	3600	250
Nicor Drlg	32	d-e	2700	MC 1220EB	2000	250
Penrod Drlg	11	dsl	2600	Nat 1320M	3425	250
	14	dsl	3075	S/B N12A	1840	200
	17	dsl	2600	Nat 1320M	3425	250
	27	dsl	2600	C-E C2	2000	250
Power Rig Drlg	10	dsl	2600	C-E A1500	1450	300
	17	d-e	2000	Idco E1700	2400	160
	20	dsl	1850	Idco E900	900	130
Richards Drlg	10	d-e	3400	Olwl E3000	3000	300
ASCENSION						
Loffland Bros	167	dsl	2160	MC U814C	2400	200
Quarles Drlg	19	dsl	1800	Olwl 96	1200	150
ASSUMPTION						
Cliffs Drlg	16	dsl	2600	Nat 1320	2475	250
Explorer Drlg	26	dsl	2000	MC U712EA	2730	160
Glasscock Drlg	65	dsl	2200	Nat 110	1700	160
Merit Drlg	1	d-s	2800	Olwl 2000E	2000	250
AVOYELLES						
Power Rig Drlg	12	dsl	3200	C-E A1500M	2200	300
BEAUREGARD						
Challenger Drlg	21	dsl	900	S/B N75	1000	120
Glasscock Drlg	63	dsl	2200	Nat 110	1700	160
Nicor Drlg	78	d-m	2125	Nat 100	750	140
BIENVILLE						
Sawyer Drlg & Serv	9	dsl	800	S/B N45-M	800	100
Transcontinental Drlg-Magnolia	83	dsl	1000	G-D 800	1000	150
BOSSIER						
Butler-Johnson	2	dsl	1900	S/B N85	1900	150
D B Drlg-Shreveport	18	dsl	1040	Schaf SC800	1040	140
Justiss Oil	27	dsl	700	Beth MC450	900	120
Lagersen Drlg	6	d-e	2000	Idco 2500E	2500	220
Mosley Well Serv	7	dsl		Cbot	475	100
Nelson Drlg & Well Serv	1	dsl	600	S-H 7000	600	100
	2	dsl	1000	S/B N75	1000	130
Noble Drlg	N-81	dsl	1420	Nat 80	1420	140
Remco Drlg	1	dsl	900	Cbot 2042	475	100
	2	dsl	1200	S/B TR800	800	120
Sawyer Drlg & Serv	12	dsl	900	Wils Giant	900	120
	4	dsl	1000	S/B N7	1000	125
	6	gas	1200	S/B N75	1200	130
Verna Corp	27	dsl	1000	MC U15	600	100
CADDO						
Bailey Drlg	1	dsl	1700	Cbot 2550	1000	135
	4	dsl	500	MC U31	350	65
Continental Drlg	11	d-e	2600	Idco E1700	1700	190
D B Drlg-Shreveport	28	dsl	1650	C-E EDA	1650	160
	29	dsl	1350	Nat 75CB	1350	140
	30	dsl	1200	Beth 450	1200	125

LOUISIANA (Cont'd)

• Contractor	Rig No. •	Type Power •	Total HP All Main Mud Pumps •	Drawworks Make And Model •	Total HP Available to Drawworks •	Rated Depth With 4½-in. Pipe, 100 ft. •
CADDO (Cont'd)						
Grace France Drlg	6	dsl	1300	Nat 610	900	130
Justiss Oil	5	dsl	450	Beth S45E	300	65
Transcontinental Drlg-Magnolia	1	dsl	350	C-E GB250T	350	65
	22	dsl	750	S/B N7	750	110
	86					
Vista Drlg	25	dsl	1000	Idco Super 750	800	125
	31	dsl	600	S/B N4	400	71
Wheless Drlg	1	d-e	3200	C-E C2 Type II	2000	250
	4	dsl	1800	C-E J1100	1800	160
CALCASIEU						
Cliffs Drlg	32	dsl	2600	Nat 110	2475	200
Explorer Drlg	24	dsl	2000	MC U36	800	100
Glendel Drlg	6	d-e	2000	G-D 1100E	2000	180
Goldrus Drlg	2	d-e	2000	Olwl E2000	2000	250
Great Southern Oil & Gas	37	dsl	1000	Idco	636	100
Grey Wolf Drlg	4	dsl	1500	C-E GB800	800	125
Merit Drlg	4	d-s	2800	Olwl 2000E	2000	250
Moran Bros	38	d-s	3200	C-E C2 Type II	2000	250
Nicor Drlg	74	d-m	2900	Nat 1320M	2000	250
NL Well Serv	247	dsl	700	Cbot 2042	600	75
CALDWELL						
Justiss Oil	38	dsl	2600	C-E J1100	2600	200
Nowotny & Conley Drlg	4	dsl	1600	Nat 610	800	130
CAMERON						
Comet Drlg	8	dsl	1700	Cbot 1200	1200	135
CRC Mallard Well	19	dsl	1300	Wils 90	800	145
Delta Drlg	82	d-s	3200	C-E C2 Type II	3456	250
Eljay Drlg	1	d-s	2800	Olwl E2000	2000	250
Glasscock Drlg	64	dsl	2200	Nat 110	1700	160
	68	dsl	2700	Nat 1320	2700	200
	71	dsl	1100	Nat 110	1500	200
Goldrus Drlg	9	dsl	1750	Beth M810	1560	160
Nicor Drlg	77	d-m	2300	Nat 100	750	160
Power Rig Drlg	18	dsl	3200	C-E C2	2000	250
Quarles Drlg	16	dsl	2000	Idco Super 711	1100	170
Woolf & Magee	4	dsl	850	Idco H35	500	100
CATAHOULA						
Helmerich & Payne Intl Drlg	75	dsl	3300	Nat 1625M	3845	300
New Drlg, David	5	dsl	450	S-H 5000	500	70
	9	dsl	450	S-H 5000	550	70
CLAIBORNE						
H & S Drlg	2	dsl	1700	S/B N95	2145	140
Sawyer Drlg & Serv	14	dsl	540	Duggan DS5	540	95
	2	dsl	400	S/B N4	400	85
Transcontinental Drlg-Magnolia	23	dsl	1000	S/B N75	1000	120
Wheless Drlg	3	dsl	1800	C-E C13	1800	180
CONCORDIA						
D & D Drlg	1	dsl	325	S/B N4A	350	80
	3	dsl	450	S/B N45	500	82
Justiss Oil	17	dsl	350	Beth S45E	350	75
New Drlg, David	12	dsl	800	Wils Giant	800	130
	6	dsl	450	Beth C50	600	110
Rebel Drlg	2	dsl	350	Beth S455	350	80
DE SOTO						
Sawyer Drlg & Serv	11	dsl	600	Wils Giant	400	90
Verna Corp	23	dsl	550	MC U15	600	100
EAST BATON ROUGE						
Glasscock Drlg	66	dsl	2700	Nat 1320	2700	200
Goldrus Drlg	22	dsl	1250	Cbot 1000	872	135
Helmerich & Payne Intl Drlg	73	d-e	2835	Olwl 3000M	3400	300
JFP Well Serv	4	dsl	2000	Olwl E2000	2000	250
Loffland Bros	114	d-e	3300	MC U1220EBD	3300	300
	116	d-e	3300	MC U1220EBD	3300	300
	21	d-e	3200	MC U1220EBD	2500	300
	330	dsl	2400	MC U1220	2775	220
Nicor Drlg	58	dsl	1100	MC U15	700	120
Noble Drlg	OW-21	d-e	3300	Olwl E2000	3300	250
Parker Drlg	174	dsl	3000	OIME Hercules 3000E	3000	300
Penrod Drlg	110	dsl	1600	Nat 1825M	2200	300
	2	dsl	2600	C-E C2	3425	250
	4	dsl	3425	C-E C3	2200	300
	5	d-e	3425	C-E C3	3200	300
EAST FELICIANA						
New Drlg, David	10	dsl	900	C-E GB500	600	115
Noble Drlg	E1102	dsl	1870	C-E A1100	1870	180

LOUISIANA (Cont'd)

• Contractor	Rig No. •	Type Power •	Total HP All Main Mud Pumps •	Drawworks Make And Model •	Total HP Available to Drawworks •	Rated Depth With 4½-in. Pipe, 100 ft. •
EVANGELINE						
Goldrus Drlg	1	d-e	2000	Olwl E3000	3000	300
	4	dsl	1200	S/B N75	1040	140
Wilson Bros Drlg	7	dsl	1400	Nat 80B	1400	125
IBERIA						
Bay Drlg	1	dsl	3600	Nat 1320M	3600	250/ 5"
CRC Mallard Well	17	dsl	1300	Wils 90	800	145
NL Well Serv	269	dsl	304	Cbot 1287	300	
Richards Drlg	2	dsl	1500	S/B N75	1200	125
IBERVILLE						
Comet Drlg	12	dsl	1700	Cbot 1200	1200	135
Explorer Drlg	10	dsl	1836	Beth	1750	125
Grey Wolf Drlg	6	d-e	3000	C-E C11	2000	250
JACKSON						
Culver Drlg	14	dsl	2400	MC U914	2400	160
	20	dsl	2000	Nat 1320	2000	250
JEFFERSON						
Explorer Drlg	16	dsl	1350	MC U1220E13	3300	250
JEFFERSON DAVIS						
Bailey Drlg, Pernie	2	dsl	2000	Nat 80B	1950	140
Comet Drlg	14	dsl	2600	G-D 1500	2600	250
Delta Drlg	85	d-s	3900	C-E C2 Type II	3456	250
Exeter Drlg Southern	32	dsl	2800	G-D 1500	2800	250
Grey Wolf Drlg	3	d-e	3000	C-E ECB	2000	250
Resource Drlg	11	dsl	3105	Nat 1625	3740	300
Wilson Bros Drlg	10	dsl	2200	Nat 110	2100	200
	5	dsl	2600	Nat 110M	2700	200
	6	dsl	2600	Nat 1320	2700	300
	8	dsl	1750	Nat 110	1750	180
LA SALLE						
Justiss Oil	37	dsl	200	J-M500	225	50
Rebel Drlg	3	dsl	500	Idco H30	400	90
LAFAYETTE						
Cliffs Drlg	26	dsl	2000	Nat 110	1650	180
Culver Drlg	10	dsl	1500	Nat 110	1500	160
Decca Drlg	21	dsl	1600	MC 914C	2100	180
Diamond M Land Drlg	174	dsl	2600	Nat 110M	2550	160
Dual Drlg	21	dsl	2600	C-E C1	1500	220
Explorer Drlg	12	dsl	1350	Idco 700	2730	95
	14	dsl	1300	Cbot 2650	2000	135
	18	dsl	1300	Cbot 2650	2000	135
	20	dsl	800	S/B TR800	2000	110
	30	dsl	2000	S/B TR800	1400	200
	6	dsl	1300	MC	2730	200
Grey Wolf Drlg	8	d-e	3000	C-E C2 Type II	2000	250
JFP Well Serv	6	dsl	2000	Olwl E2000	2000	250
M G F Drlg-Lafayette	42	dsl	1500	Olwl 96	1500	160
Nicor Drlg	73	d-m	1000	Cbot 2550TRD	1200	150
	76	d-m	1825	Nat 75	750	150
Power Rig Drlg	19	dsl	3000	C-E C3	3300	300
	24	d-e	3300	C-E C3	3000	400
Williams Drlg	1	d-e	3200	G-D 1500	2000	250
	2	d-e	3200	G-D 1500	2000	250
Wilson Bros Drlg	11	dsl	2400	Nat 110	2700	200
	3	dsl	2600	Nat 1320	2700	300
	9	dsl	2600	Nat 110	2700	200
LAFOURCHE						
CRC Mallard Well	20	dsl	1300	Wils 90	800	145
Delta Drlg	97	dsl	2000	C-E J1100	1560	160
	25	dsl	2300	C-E C1 Type III	2592	180
Glendel Drlg	5	d-e	2000	G-D 1100E	2000	180
Goldrus Drlg	10	dsl	1250	Beth MA810	1176	130
	11	dsl	1500	S/B N12A	2000	160
	8	d-e	1750	Olwl 840E	1700	180
Loffland Bros	145	dsl	2955	MC U1220	2955	200
M G F Drlg-Lafayette	47	dsl	1800	Idco S711	1500	180
Murco Drlg	26	dsl	2800	Olwl N2000-B	3000	300
New Drlg, David	7	dsl	500	MC U34	525	80
Nicklos Drlg	25	dsl	2000	C-E A1500	2119	200
Nicor Drlg	34	d-e	2000	MC U914EC	1400	210
Power Rig Drlg	15	dsl	2350	C-E C1 Type III	1950	160
Rio Colorado Drlg	120					
Wilson Bros Drlg	23	d-e	2800	Olwl E2000	2000	250
	4	dsl	2600	Nat 110	2700	200
LINCOLN						
Dual Drlg	11	dsl	2800	Olwl 860	1400	180
Nowotny & Conley Drlg	7	dsl	1600	Nat 610	800	130
Rosamond Drlg	7	dsl	1450	S/B N10	1275	135
	9	dsl	925	G-D 700	1300	160
LIVINGSTON						
Cliffs Drlg	24	dsl	2600	Nat 1320	2475	250
Goldrus Drlg	6	d-e	3400	Olwl E2000	1700	200

LOUISIANA (Cont'd)

• Contractor	Rig No. •	Type Power •	Total HP All Main Mud Pumps •	Drawworks Make And Model •	Total HP Available to Drawworks •	Rated Depth With 4½-in. Pipe, 100 ft. •
LIVINGSTON (Cont'd)						
Grey Wolf Drlg	2	d-e	3000	C-E C11	2000	250
	5	d-e	3000	C-E EDA	2000	250
	7	d-e	3000	C-E C11	2000	250
Helmerich & Payne Intl Drlg	83	d-e	2800	Olwl E2000	2000	260
JHJ Drlg	4	dsl	1000	OIME SL7	1400	170
	5	dsl	1000	OIME SL7	1400	170
New Drlg, David	11	dsl	900	C-E GA500	600	115
Nicor Drlg	18	dsl	1050	MC U15	700	125
	67	d-e	1700	Olwl 660E	800	120
NATCHITOCHES						
Penrod Drlg	28	dsl	3425	Nat 1320M	2200	250
OUACHITA						
Justiss Oil	9	dsl	800	C-E GC500	1200	125
Nowotny & Conley Drlg	2	dsl	2000	OIME SL-1000	1200	150
PLAQUEMINES						
Bailey Drlg, Pernie	7	dsl	1200	G-D 800	1200	110
Cliffs Drlg	18	dsl	2600	Nat 110	2475	200
CRC Mallard Well	15	dsl	1300	Wils 90	800	145
M G F Drlg-Lafayette	41	dsl	1600	Olwl 96	1600	150
Nicor Drlg	68	dsl	2100	MC U712A	1200	160
POINTE COUPEE						
Cliffs Drlg	43	d-e	2600	Nat 1320UE	3300	250
Decca Drlg	23	dsl	1800	Nat 1320M	2700	250
Dual Drlg	28	dsl	3400	Olwl E3000	2000	300
Eljay Drlg	3	d-s	3400	Olwl E3000	3000	300
	4	d-s	3400	Olwl E3000	3000	300
Glasscock Drlg	74	dsl	1800	Nat 1625M	3000	300
M G F Drlg-Lafayette	401	d-e	1600	Nat 320UE	2000	250
Parker Drlg	165	dsl	3000	OIME Hercules 3000E	3000	300
	175	dsl	3000	OIME Hercules 3000E	3000	300
Penrod Drlg	1	dsl	3425	Nat 1625M6	2200	300
	122	dsl	1300	Nat 1625M	2000	250
RICHLAND						
Underwood Oil Well Serv	12	dsl	350	S/B N3	350	40
SABINE						
Nicor Drlg	81	d-m	900	Idco H40	550	
Noble Drlg	N-612	dsl	1420	Nat 80B	1420	150
Resource Drlg	12	dsl	3105	Nat 1625	3740	300
ST BERNARD						
CRC Mallard Well	18	dsl	1300	Wils 90	800	145
ST HELENA						
Bailey Drlg, Pernie	6	dsl	3000	Nat 110M	3000	180
Glasscock Drlg	72	dsl	800	Nat 80B	1250	120
Grey Wolf Drlg	9	d-e	3000	C-E CZ11	2000	250
Nicor Drlg	4	dsl	1500	G-D 800	1000	150
Prairie States Expl	2	dsl	1100	Unit U33A	800	130
SEE Land Drlg	15	dsl	900	G-D 1100	1500	180
Transcontinental Drlg-Jackson	14					
ST JAMES						
Power Rig Drlg	9	dsl	1650	C-E D3	1450	140
ST LANDRY						
Bailey Drlg, Pernie	1	dsl	1500	S/B N75	850	120
	4	dsl	2900	Nat 1320M	3000	200
	8	dsl	2000	Nat 110M	1500	200
Glasscock Drlg	73	dsl	1000	Nat 110M	1500	180
Nicklos Drlg	23	dsl	1850	Nat 110	1755	180
	79	d-e				
	80	d-s	4800	C-E C3	3000	300
Woolf & Magee	12	dsl	850	Idco H35S	500	100
ST MARTIN						
Glasscock Drlg	70	dsl	1600	Nat 80B	1600	140
Helmerich & Payne Intl Drlg	41	dsl	1650	Nat 110	1815	220
NL Well Serv	286	dsl	1000	Cbot 2550HL	1500	160
	298	dsl				
Power Rig Drlg	21	dsl	3500	C-E C2	2000	250
ST MARY						
Goldrus Drlg	7	dsl	1750	S/B N96	1560	160
Loffland Bros	103	d-e	3300	MC U1220EBD	3300	300
Noble Drlg	N-131	dsl	2130	Nat 130	2130	180
	OW-31	d-e	3135	Olwl E3000	3135	250
Power Rig Drlg	14	d-s	3200	Idco E2100	4161	250
Resource Drlg	RD-30	dsl	3105	Nat 1625	3740	300

LOUISIANA (Cont'd)

• Contractor	Rig No. •	Type Power •	Total HP All Main Mud Pumps •	Drawworks Make And Model •	Total HP Available to Drawworks •	Rated Depth With 4½-in. Pipe, 100 ft. •
TANGIPAHOA						
Challenger Drlg	34	dsl	1200	S/B N75	1500	120
TERREBONNE						
Comet Drlg	18	d-e	2700	I-R 2550HL	1500	160
CRC Mallard Well	12	dsl	800	Wils 90	800	110
Drillers	52					
Glasscock Drlg	67	dsl	2700	Nat 1320	2700	200
Penrod Drlg	29	dsl	3425	Nat 1320M	2200	250
Power Rig Drlg	11	dsl	2700	C-E C1	2000	250
UNION						
Sawyer Drlg & Serv	10	gas	1200	Whln 1000	1200	130
	3	dsl	1100	S/B N7	1100	120
	8	gas	1100	S/B N7	1100	115
VERMILION						
Butler-Johnson	11	d-e	2000	Nat 110UE	2000	200
Cliffs Drlg	28	dsl	2600	Nat 1320	2475	250
	30	dsl	2600	Nat 1320	2475	250
	31	dsl	2600	Nat 110	2475	200
CRC Mallard Well	11	dsl	800	Wils 90	900	110
	14	dsl	1300	Wils 90	800	145
Delta Drlg	47	dsl	2300	Nat 130	2250	200
	76	d-s	3200	G-D 3000RE	4600	300
Great Southern Oil & Gas	42	dsl	665	Idco	636	100
M G F Drlg-Lafayette	44	dsl	2000	MC U914	1500	180
Nicor Drlg	72	dsl	2600	Nat 1320M	2000	250
Power Rig Drlg	22	d-e	2700	Idco E1700	1700	180
	23	d-e	2000	C-E C2	2000	300
Resource Drlg	1	dsl	3105	Nat 1320	3740	250
VERNON						
Woolf & Magee	6	dsl	850	Idco H35	500	100
WASHINGTON						
Tesoro Drlg	6	dsl	2600	Nat 1625M	2742	300
WASHITA						
Sawyer Drlg & Serv	5	dsl	1500	S/B N75	1500	130
	7	gas	900	Idco 750	900	130
WEBSTER						
Murco Drlg	2	dsl	2200	Olwl 760E	1000	150
WEST BATON ROUGE						
Dual Drlg	9	dsl	3200	Nat 1320M	2000	250
Parker Drlg	180	dsl	3000	OIME Hercules 3000E	3000	300
WEST FELICIANA						
Delta Drlg	35	d-e	2600	C-E C1 Type II	3100	200
Loffland Bros	115	d-e	3300	MC U1220EBD	3300	300

MICHIGAN

• Contractor	Rig No. •	Type Power •	Total HP All Main Mud Pumps •	Drawworks Make And Model •	Total HP Available to Drawworks •	Rated Depth With 4½-in. Pipe, 100 ft. •
UNDESIGNATED						
Miller Expl	3	dsl	750	OIME SL5	1000	180
ALPENA						
Provins Drlg, T D	3	dsl	1200	Idco 1000	900	100
CLARE						
Bigard Drlg, James	12	d-e	1000	Idco ED1200	2000	200
Nicor Drlg	17	dsl	1400	Olwl 76	1000	150
Provins Drlg, T D	2	dsl	1200	Idco H37	456	80
GRAND TRAVERSE						
Bigard Drlg, James	14	dsl	600	Idco H1000	1000	120
Cactus Drlg Corp	16	dsl	800	Nat 50A	800	100
Nicor Drlg	21	dsl	800	Idco H35	510	70
ISABELLA						
Bigard Drlg, James	7	dsl	600	Idco H37	535	75
L & G Drlg	1	dsl	398	Idco H35	398	50
Provins Drlg, T D	9	dsl	2100	Cbot 2550HL	1800	200
JACKSON						
Bigard Drlg, James	10	dsl	700	Idco H44	600	85
Scott Drlg, Don	5	dsl	1000	Idco H1000	900	80
KALKASKA						
Cactus Drlg Co	17					
	28					
Cactus Drlg Corp	28	dsl	800	Nat 50A	800	100
L & G Drlg	3	dsl	500	C-E GB350	600	100
Provins Drlg, T D	5	dsl	1200	Idco 1000	1000	120
LIVINGSTON						
Nicor Drlg	52	d-m	600	S/B DH14210	550	84
Provins Drlg, T D	4	dsl	1000	Coop 550	500	80

MICHIGAN (Cont'd)

• Contractor	Rig No. •	Type Power •	Total HP All Main Mud Pumps •	Drawworks Make And Model •	Total HP Available to Drawworks •	Rated Depth With 4½-in. Pipe, 100 ft. •
MACOMB						
Escor	4	dsl	500	Idco DI7015	600	75
MANISTEE						
Bigard Drlg, James	8	dsl	600	Idco H44	600	85
	9	dsl	600	Idco H44	600	85
L & G Drlg	2	dsl	500	Wils 65	600	80
Nicor Drlg	22	dsl	1200	Idco H35	720	70
Provins Drlg, T D	8	dsl	1200	Idco H1000	1000	120
MIDLAND						
Nicor Drlg	53	d-m	500	S/B DH14210	550	84
NEWAYGO						
Bigard Drlg, James	17	dsl	550	Wils 75	900	120
Provins Drlg, T D	6	dsl	1125	Idco 700	700	90
OAKLAND						
Bigard Drlg, James	3	dsl	535	Cbot 550	550	75
OCEANA						
Provins Drlg, T D	7	dsl	1200	Idco H1000	1000	120
OSCEOLA						
Cardinal Drlg	21	dsl	1000	C-E GC500	1000	125
OTSEGO						
Bigard Drlg, James	15	dsl	600	Idco H1000	1000	120
Cactus Drlg Co	12					
	16					
Cactus Drlg Corp	12	dsl	800	Olwl 66	800	100
	17	dsl	800	S/B N55	800	110
	21	dsl	800	Beth M58	800	120
Nicor Drlg	24	dsl	650	Idco H525	850	85
Provins Drlg, T D	10	dsl	1200	Idco H1000	1000	120
TRAVERSE						
Cactus Drlg Co	21					
TUSCOLA						
Bigard Drlg, James	16	dsl	475	Idco H44	600	85
Escor	5	dsl	949	Idco H35	445	55

MISSISSIPPI

• Contractor	Rig No. •	Type Power •	Total HP All Main Mud Pumps •	Drawworks Make And Model •	Total HP Available to Drawworks •	Rated Depth With 4½-in. Pipe, 100 ft. •
UNDESIGNATED						
New Drlg, David	3	dsl	450	S-H 6000	550	70
Par-Co Drlg	1	dsl	300	Idco H30	300	60
	4	dsl	700	Wils 42	500	80
ADAMS						
Energy Drlg	1	dsl	400	Beth S45A	500	90
	3	dsl	2000	C-E D3	2000	180
Justiss Oil	8	dsl	450	C-E GA500	900	110
Wilcox Drillers	5	dsl	700	Beth S45E	550	85
AMITE						
Justiss Oil	16	dsl	600	C-E GB	900	120
	22	dsl	1800	Nat 80B	1420	140
CLARK						
Murco Drlg	22	dsl	2400	S/B N95	2400	200
HANCOCK						
Chesley Pruet Drlg	15	dsl	4800	C-E C3	4800	300
Penrod Drlg	10	dsl	2600	Nat 1320M	3425	250
	112	dsl	1600	Nat 1625M	3000	300
HINDS						
Delta Drlg	56	dsl	2600	Wils Super 250	2592	250
Nicor Drlg	80	d-m	975	Wils Mogul 42	450	90
Transcontinental Drlg-Jackson	12					
HOLMES						
Durkee Drlg	18	dsl		Nat 55		120
HUMPHREYS						
Nicor Drlg	15	dsl	2100	Olwl 76	1000	150
	7	dsl	1020	MC U15	700	115
JASPER						
Marion Drlg	1	dsl	1800	C-E M810	1800	180
	7	dsl	2400	C-E C1	2400	200
	8	d-e	2400	C-E C1	2400	200
New Drlg, David	17	dsl	1500	C-E C2	2000	220
Transcontinental Drlg-Jackson	85					
JEFFERSON DAVIS						
Exeter Drlg Southern	15	dsl	2550	G-D 1100	1550	180

MISSISSIPPI (Cont'd)

• Contractor	Rig No. •	Type Power •	Total HP All Main Mud Pumps •	Drawworks Make And Model •	Total HP Available to Drawworks •	Rated Depth With 4½-in. Pipe, 100 ft. •
JONES						
Chesley Pruet Drlg	16	dsl	3600	C-E C2	3600	300
New Drlg, David	8	dsl	1200	Nat 80B	1200	150
Nicor Drlg	48	dsl	2700	MC U1220EB	2000	250
Penrod Drlg	24	dsl	2600	S/B N12A	1950	250
Rapad Drlg	6	d-e	2000	C-E D3	1000	160
SEE Land Drlg	11	dsl	945	C-E SDR	500	90
	7	dsl	1200	S/B N4	325	65
Tesoro Drlg	5		2000	Nat 80B	1650	150
	7	dsl	2000	Nat 80B	1650	150
	8	dsl	3200	Nat 1320	3600	300
LAMAR						
Energy Drlg	2	dsl	535	Idco H35S	540	95
LAWRENCE						
Wilson Bros Drlg	2	dsl	1900	Nat 110	1900	200
LINCOLN						
Marion Drlg	2	dsl	2400	C-E C1	2400	200
MADISON						
Par-Co Drlg	3	dsl	700	S-H 7000	500	70
MARION						
Chesley Pruet Drlg	12	dsl	3600	C-E C2	3600	250
Helmerich & Payne Intl Drlg	77	d-e	2200	Nat 110UE	2430	180
Justiss Oil	23	dsl	1800	C-E J1100	2400	200
JHJ Drlg	3	d-s	1600	S/B NE12A	2000	250
Penrod Drlg	109	dsl	2000	S/B N75A	1760	150
MONROE						
Apollo Drlg Inc	1	dsl	500	Nat 370	550	105
	5	dsl	500	Nat 370	550	105
Lohmann Drlg	6	dsl	300	Nat 32	550	75
Rapad Drlg	5	dsl	950	Nat 370	950	120
MONTGOMERY						
Resource Drlg	10	dsl	2330	Nat 110	2740	180
PIKE						
SEE Land Drlg	2	dsl	720	MC U15	300	40
	3	dsl	1200	G-D 500	500	90
	9	dsl	1500	Nat 100	1200	140
RANKIN						
Helmerich & Payne Intl Drlg	71	dsl	1830	Nat 1320M	1830	230
SCOTT						
Murco Drlg	10	dsl	2200	S/B N95	2400	200
Rapad Drlg	4	d-e	4000	C-E C1	2000	250
SIMPSON						
Helmerich & Payne Intl Drlg	74	dsl	3300	Olwl	3895	300
	86	d-s	4250	Nat 1625DE	4250	300
Transcontinental Drlg-Jackson	18					
	84					
	91					
	92					
SMITH						
Delta Drlg	65	dsl	2300	C-E C1 Type III	2592	180
Tesoro Drlg	1	dsl	2600	Nat 1320M	2742	250
WALTHALL						
Murco Drlg	46	d-s	2600	Olwl E2000	2000	300
Tesoro Drlg	3	dsl	2600	Nat 1320M	2742	250
WARREN						
Justiss Oil	35	dsl	1250	C-E J1400	1200	180
	7	dsl	1800	C-E J1400	2900	200
Penrod Drlg	12	dsl	3850	G-D 1500	2120	200
WAYNE						
Justiss Oil	24	dsl	3600	C-E J1400	3000	220
JHJ Drlg	2	dsl	1300	S/B NE95A	1700	200
WILKINSON						
Penrod Drlg	120	dsl	1600	Nat 1625M	3000	300
Wilcox Drillers	6	dsl	1100	C-E 550	800	125
	7	dsl	300	Beth 545A		60

MONTANA

• Contractor	Rig No. •	Type Power •	Total HP All Main Mud Pumps •	Drawworks Make And Model •	Total HP Available to Drawworks •	Rated Depth With 4½-in. Pipe, 100 ft. •
UNDESIGNATED						
Hussar Drlg	1	dsl	500	C-E GA250	300	75
	2	dsl	450	C-E Modified 150	300	65
BEAVERHEAD						
Cardinal Drlg	17e	d-e	1000	C-E D3	1000	180

MONTANA (Cont'd)

• Contractor	Rig No. •	Type Power •	Total HP All Main Mud Pumps •	Drawworks Make And Model •	Total HP Available to Drawworks •	Rated Depth With 4½-in. Pipe, 100 ft. •
BIG HORN						
Atco Drlg	58	d-e	1800	Nat 80UE	1800	150
BROADWATER						
Anderson-Myers Drlg	8	dsl	1800	Nat 80	1800	180
CAMPBELL						
Harpel Drlg	3	dsl	1400	Idco H725	900	100
CASCADE						
Molen Drlg	2	dsl	800	S/B N46	800	100
DAWSON						
Atco Drlg	17	d-e	1800	Nat 610E	750	120
Grace-Bomac Drlg	59	dsl	1650	Nat 80B	1650	160
Penrod Drlg	101	dsl	1684	S/B N46	1000	100
Transcontinental Drlg-Denver	82	dsl	1000	G-D GD700	1470	125
FALLON						
Cliffs Drlg	8	dsl	1600	Nat 610	1100	125
Shelby Drlg	54-E	d-e	1000	Nat 370ESCR	650	100
GARFIELD						
Anderson-Myers Drlg	3	dsl	1200	C-E G500	1200	110
GLACIER						
Comanche Drlg Co	1	dsl	430	Idco H30	400	50
Simmons Drlg	31	dsl	350	S-H 6000	350	65
HILL						
Elenburg Expl	5	dsl	320	W-N CC2000	180	25
K B Drlg	1	dsl	278	Crdw A150A	185	45
	2	dsl	278	Crdw AH-91	185	50
JEFFERSON						
Bawden Drlg Ltd, Peter	14	d-s	2600	Nat 1320UE	2000	220
LEWIS & CLARK						
Cardinal Drlg	16e	d-e	1000	C-E D3	1000	180
LIBERTY						
Elenburg Expl	10	dsl	320	Elenburg	430	60
MEAGHER						
Molen Drlg	5	dsl	1200	S/B N46	800	100
MUSSELSHELL						
Anderson-Myers Drlg	5	dsl	1000	C-E GB500	820	100
Molen Drlg	1	dsl	400	C-E GB250T	350	65
PHILLIPS						
Elenburg Expl	8	dsl	320	W-N CC2000	230	25
PONDERA						
Aspen Drlg	1	dsl	400	Ewb 3500	475	35
Cardinal Drlg	14	dsl	560	C-E GB350	840	85
Elenburg Expl	2	dsl	320	W-N CC2000	230	25
POWDER RIVER						
Shelby Drlg	10	dsl		Sup 400ESCR		85
PRAIRIE						
True Drlg	22	dsl	1200	Nat 55	1200	130
RICHLAND						
Blocker Drlg-Houston	58					140
Helmerich & Payne Intl Drlg	88	dsl	1815	Olwl 860	1815	160
Kenting Drlg	11	dsl	1200	MC U40	1200	140
Nicor Drlg	16	dsl	1550	Olwl 76	1000	150
	40	d-e	1700	Olwl 660E	700	120
	62	dsl	1000	Nat 610	750	125
Simmons Drlg	47	dsl	350	Troy M600	350	75
Transcontinental Drlg-Denver	31	dsl	1200	Wils 90B	1354	150
ROOSEVELT						
Apollo Drlg	8	dsl	1200	Olwl 76	1200	105
Bird Drlg	3	dsl	615	C-E 500	800	110
Challenger Drlg	1	dsl	900	C-E BC500	1000	110
Grace-Bomac Drlg	31	dsl	1325	Beth S45E	825	80
	50	dsl	1650	Nat 80B	1650	160
Noble Drlg	N-811	dsl	1606	Nat 80B	1606	150
ROSEBUD						
Molen Drlg	3	dsl	700	Nat 50A	700	90
Soape Drlg	1	dsl	950	Nat 45	950	75
SHERIDAN						
Brinkerhoff-Signal	17	dsl	1580	Nat 80B	1580	140
Forest	3	d-e	2000	Idco 1200E	1600	160
SHERIDAN (Cont'd)						
Grace-Bomac Drlg	37	dsl	1100	G-D 700M	1100	125
Noble Drlg	N-82	dsl	1200	Nat 80	1200	150
Transcontinental Drlg-Denver	46	dsl	2000	Nat 80B	1956	150
TETON						
Alkins Drlg	2	dsl	200	B-E	200	30
Molen Drlg	4	dsl	1350	S/B N75A	1350	140
TOOLE						
Comanche Drlg Co	2	dsl	430	Idco H30	400	50
	5	dsl	430	Idco H30	400	50
VALLEY						
Atco Drlg	6	dsl	1020	Nat 370	700	85
Challenger Drlg	24	dsl	500	S/B N4A	650	65
	31	dsl	1200	S/B N75	1200	120
Drilcon	1	dsl	1125	Beth 450	1125	110
	5	dsl	715	Idco H725	700	110
Helmerich & Payne Intl Drlg	53	d-e	1200	Idco H525	800	120
YELLOWSTONE						
Elenburg Expl	11	dsl	430	Elenburg 6000	430	80
Molen Drlg	6	[illegible]	[illegible]	C-E C1 Type II	2000	220

NEBRASKA

• Contractor	Rig No. •	Type Power •	Total HP All Main Mud Pumps •	Drawworks Make And Model •	Total HP Available to Drawworks •	Rated Depth With 4½-in. Pipe, 100 ft. •
UNDESIGNATED						
MOXA Drlg	1	dsl	540	Idco 35	380	70
BANNER						
Exeter Drlg Northern	42	dsl	375	Nat T32	460	78
CHEYENNE						
Banner Drlg	4	dsl	400	Apache 25040	375	50
DUNDY						
Murfin Drlg	20	dsl	525	Nat 370	600	75
HARLAN						
Rains & Williamson Oil	1	dsl	525	Beth S45-B	450	55
HITCHCOCK						
Murfin Drlg	3	dsl	400	Nat T25	400	60
Stoeppelwerth Drlg	1	dsl	375	Nat T32	375	55
KIMBALL						
Banner Drlg	3	dsl	500	Nat T45	800	95
MORRILL						
Toltek Drlg	3	dsl	680	S/B N4A	440	85
RED WILLOW						
Murfin Drlg	7	dsl	525	Nat T32	400	60
Stoeppelwerth Drlg	2	dsl	350	Crdw 500L	325	45
SCOTTS BLUFF						
Toltek Drlg	1	dsl	440	S/B N4	440	85
SIOUX						
Shelby Drlg	11	dsl		Idco 35ESCR		100

NEVADA

• Contractor	Rig No. •	Type Power •	Total HP All Main Mud Pumps •	Drawworks Make And Model •	Total HP Available to Drawworks •	Rated Depth With 4½-in. Pipe, 100 ft. •
CLARK						
Brinkerhoff-Signal	81	d-e	2100	Olwl 760E	2100	180
Continental Drlg	17	d-e	2600	Idco E1700	1700	190
Loffland Bros	211	dsl	1260	MC U15	1000	100
ELKO						
Loffland Bros	1	dsl	1200	MC U40	1440	130
EUREKA						
Brinkerhoff-Signal	9	dsl	550	S/B N45	600	75
WHITE PINE						
Montgomery Drlg	46					
	48	dsl	2000	Nat 110	2000	200

NEW JERSEY

• Contractor	Rig No. •	Type Power •	Total HP All Main Mud Pumps •	Drawworks Make And Model •	Total HP Available to Drawworks •	Rated Depth With 4½-in. Pipe, 100 ft. •
SUSSEX						
New Jersey Drlg	T5	dsl	400	I-R	400	50

NEW MEXICO

• Contractor	Rig No. •	Type Power •	Total HP All Main Mud Pumps •	Drawworks Make And Model •	Total HP Available to Drawworks •	Rated Depth With 4½-in. Pipe, 100 ft. •
UNDESIGNATED						
Ard Drlg	1	dsl	600	S-H	670	85
	2	dsl	1086	MC U20	1800	180
	3	dsl	1400	MC U40	1200	150
	7	dsl	1200	MC U40	1200	140
BERNALILLO						
Earl & Son	2					
Earl & Son Drlg	1		1500	I-R	3800	15
CHAVES						
Artesia Fishing Tool	2	dsl	500	G-D	500	60
Cactus Drlg Co	70	dsl	730	Nat 370	950	90
Collier Drlg	10	dsl	600	Chal	475	55
Dual Drlg	30	dsl	1400	Olwl 500	500	70
	31	dsl	1600	Olwl 500	500	70
L & M Drlg	1	dsl	750	G42	440	75
	2	dsl	750	G-D 3000	380	60
La Rue Drlg	2	dsl	500	G-D 3000	500	60
W E K Drlg	3	dsl	450	C-E S45E	440	65
Young Drlg	5	dsl	750	Crdw K500	600	80
EDDY						
Ard Drlg	5	dsl	1986	MC U20	1800	150
Artesia Fishing Tool	1	dsl	400	May 3000	200	40
Cactus Drlg Co	25					
	73	dsl	454	C-E U34	454	60
Cactus Drlg Corp	25	dsl	1100	Idco 711	1100	130
Collier Drlg	12	dsl				70
Delta Drlg	60	d-e	1825	C-E D3 Type II	2592	160
Hondo Drlg	10	dsl	1250	S/B N75A	1250	150
	11	dsl	1050	MC U15	700	100
Kenai Drlg of New Mexico	36	dsl	650	Wils Giant	700	105
	37	dsl	1750	Nat 100M	1750	180
La Rue Drlg	1	dsl	650	Nat T20	500	70
M G F Drlg-Midland	23	dsl	1150	Olwl 76	1150	135
	26	dsl	1725	G-D 1100	1725	190
McVay Drlg	10	dsl	1300	Nat 100	1300	160
	7	dsl	1200	Nat 75CA	1200	130
	9	dsl	1400	Nat 110	1400	180
Moranco	1	dsl	1100	OIME 1000SL	1000	150
Parker Drlg	161	gas	1000	Nat 75	1000	160
	2	dsl	1200	OIME SL1000P	1200	140
	34	gas	1000	Nat 75	1000	160
Resource Drlg	6	dsl	2330	Nat 110	2740	180
T O T Drlg	4	dsl	1155	OIME SL5	1155	150
TMBR Drlg	2	dsl	350	Weis W45	450	70
W E K Drlg	1	dsl	770	MC U34	380	75
GUADALUPE						
Cactus Drlg Co	53	dsl	520	Beth S55	670	75
LEA						
Ard Drlg	6	dsl	1200	MC U15	1200	115
Cactus Drlg Co	23					
	27					
	67	dsl	520	Nat T32	454	65
	68	dsl	520	Idco H30	454	60
	8					
Cactus Drlg Corp	23	dsl	2550	Nat 110	2550	140
	27	dsl	2550	S/B N20	2550	300
	8	dsl	1200	S/B N7	1200	110
Delta Drlg	3	dsl	2300	C-E C1 Type III	2331	180
Dual Drlg	14	dsl	1900	Olwl 760	1000	150
	19	dsl	1850	Olwl 760	1000	160
Forex Neptune and/or Affil	50	d-e	3200	G-D 1500E	2000	217
Hondo Drlg	12	dsl	1250	G-D 800	1250	150
	5	dsl	1100	Nat 55C	800	130
Kenai Drlg of New Mexico	2	dsl	2000	C-E J1100	2000	150
	21	dsl	1350	MC U20	1350	150
	22	dsl	1700	C-E J1100	1700	150
	23	dsl	1800	C-E JB1250	1800	150
	31	dsl	650	MAC 300	400	65
Kenai Drlg of Texas	14	dsl	700	C-E GC500	800	115
Landis Drlg	1	dsl	1000	BDW 650M	1000	130
	3	dsl	800	S/B N55	900	115
McVay Drlg	8	gas	1200	Nat 80B	1200	150
Moranco	10	dsl	1100	MC	750	110
	2	dsl	1100	C-E GB800	1000	150
	3	dsl	1100	MC 712A	1000	150
	5	dsl	750	MC U15	750	110
	6	dsl	750	S/B N75	750	120
	7	dsl	1100	S/B N75	1000	150
	9	dsl	750	S/B N55	750	110
Parker Drlg	211	gas	1000	Nat 75	1000	160
	38	gas	1200	Nat 100M	1200	180
	58	dsl	1650	Nat 100M	1650	160
	65	gas	1800	Nat 100M	1800	230
	85	gas	1800	Nat 130	1800	230
	90	gas	1800	Nat 130	1800	250
Prairie States Expl	3	dsl	1750	Unit U712A	1960	180
Quarbe Drlg	2	dsl	1500	OIME 1000	1000	180
	6	dsl	2000	S/B N95	2200	220

NEW MEXICO (Cont'd)

• Contractor	Rig No. •	Type Power •	Total HP All Main Mud Pumps •	Drawworks Make And Model •	Total HP Available to Drawworks •	Rated Depth With 4½-in. Pipe, 100 ft. •
LEA (Cont'd)						
Resource Drlg	RD-23	del	1040	Nat 610	1220	120
Rio Colorado Drlg	142	del	1825	Nat 110	1650	180
Rod Ric	11	del	450	Nat T20	440	50
Sharp Drlg	35	del	2331	Beth 1013	2742	230
	36	del	2331	Beth MC950	2742	220
	61	del	2331	MC U914C	2742	235
	63	del	1500	C-E D3	1836	180
	65	del	1500	C-E D3	1836	180
Sterling Drlg (TX)	20	del	1260	Nat 610	840	130
	21	del	1180	S/B N46	770	110
TMBR Drlg	13	del	700	MC U15CA	500	105
	30	del	350	MC U15	500	70
Willbros Drlg	7	del	1400	C-E A800	1400	160
Wilson Bros Drlg	20	del	800	Nat 80B	1425	160
LUNA						
Bayless Drlg	7	del	1500	G-D GD700	1200	130
McKINLEY						
Antelope Drlg	1					
QUAY						
McVay Drlg	4	del	850	Nat 75	850	120
RIO ARRIBA						
Arapahoe Drlg	11	g-b	300	Nat T32	320	90
Aztec Well Serv	124	del	600	Wils 75	1100	100
	184	del	600	Wils M75	1100	
	289			Wils		105
Bayless Drlg	5	del	1500	Coop LTO550	550	85
Four Corners Drlg	10	del	1500	Crdw Drlg	750	80
	3	del	1500	Crdw KB500	700	80
	4	del	1500	Crdw KB500	700	80
	5	del	1500	Crdw KB500	700	80
	6	del	1500	Crdw KB500	700	80
Young Drlg	2	del	600	Idco DIR701	600	85
	4	del	400	Crdw K500	600	85
ROOSEVELT						
Cactus Drlg Co	18	del	520	Nat T32	67	85
W E K Drlg	2	del	1200	Idco H35	480	120
SAN JUAN						
Arapahoe Drlg	10	g-b	700	Nat 50A	500	120
	3	g-b	300	Wils Mogul	320	65
	6	del	300	Nat T32	350	80
Aztec Well Serv	171	del	600	Wils M75	700	
	222		750	Wils M75	1100	
	50	del	400	Wils Mogul	350	60
	56	del	400	Wils Mogul	350	60
Four Corners Drlg	11	del	1500	Crdw KB500	636	80
	12	del	1500	Crdw KB500	636	80
	2	del	1500	Crdw KB500	700	80
	7	del	1500	Crdw KB500	750	80
	9	del	1500	Crdw KB500	750	80
True Drlg	4	del	450	C-E GA250T	500	65
Young Drlg	3	del	400	Wils 75	600	85
SANDOVAL						
Brinkerhoff-Signal	78	del	1600	Nat 610	1100	125
SIERRA						
Cactus Drlg Co	14					
Cactus Drlg Corp	14	del	1200	Olwl 66	1200	110
VALENCIA						
Stewart Bros Drlg	52	del	324	G-D 15W	324	15
	53	del	324	G-D 15W	324	15
	54	del	1000	Fall 100	450	50

NEW YORK

• Contractor	Rig No. •	Type Power •	Total HP All Main Mud Pumps •	Drawworks Make And Model •	Total HP Available to Drawworks •	Rated Depth With 4½-in. Pipe, 100 ft. •
CATTARAUGUS						
International Petr Serv	9	del	475	Chal Model 320HD	380	45
CHAUTAUQUA						
D B Drlg	32	del	720	MC U15	720	110
	37	del	410	MC U15	625	110
Delta Drlg	78	del	250	Idco H35KD	291	60
International Petr Serv	12	del	475	Chal Model 320	380	40
	5	del	475	Wils 42	475	75
	6	del	475	Wils 42	475	75
	7	del	475	Chal 320	380	40
Underwater Gas Dev	1	del	250	Fall 3500	200	40
	3	del	320	Chal 320	320	50
	4	del	320	Challenger 320	320	50
	5	del	250	Fall 3500	250	50
	7	del	320	Chal 320	320	50
Union Drlg	15	del	1200	Idco BIR5525	425	60

NORTH DAKOTA

• Contractor	Rig No. •	Type Power •	Total HP All Main Mud Pumps •	Drawworks Make And Model •	Total HP Available to Drawworks •	Rated Depth With 4½-in. Pipe, 100 ft. •
UNDESIGNATED						
KCA Drlg	C3	del	1200	Nat 80B	1200	120
TMBR Drlg	16	del	700	Nat 50CA	600	105
	19	del	700	Nat CA50	700	100
	21	del	1100	Nat 75CA	1100	130
	22	del	700	S/B N75	750	140
	23	del	1100	Nat 75CA	1100	140
	27	del	1750	G-D 700	800	140
	28	del	1650	G-D 800	1650	160
Westburne Drlg Canada	64	del	1080	MC U914C	1080	180
BILLINGS						
Bird Drlg	8	del	615	Nat 610	800	130
Brinkerhoff-Signal	1	del	1100	G-D 800	1100	130
	11	del	1500	Nat 80B	1500	150
Burris Drlg	102	del	1000	G-D 700	1000	145
Cardinal Drlg	1	del	864	BDW 800	1140	140
	10	del	1296	C-E GB800	1296	135
	11	del	864	BDW 800	1140	140
	22	del	1554	Nat 80B	1554	150
	7	del	864	C-E GB500	864	105
Dual Drlg	17	del	1550	Beth M58	700	125
Forwest	5	d-e	2000	Nat 80UE	2000	160
Grace-Bomac Drlg	92	del	1100	G-D 700M	1100	125
Nicor Drlg	61	del	1550	Nat 610	750	120
Noble Drlg	E551	del	800	C-E A550	800	130
	N-84	del	1320	Nat 80B	1320	150
Penrod Drlg	103	del	1700	Nat 80B	2000	200
Ratliff Drlg	15	del	1650	Nat 80B	1650	180
Westburne Drlg	61	del	1050	Nat 55	1320	125
BOTTINEAU						
Cardinal Drlg	3	del	400	Nat T20	400	55
	8	del	400	Nat T20	440	55
BOWMAN						
Noble Drlg	N-57	del	800	Nat 55	800	120
BURKE						
Cardinal Drlg	5	del	541	C-E GB250	580	75
	6	del	580	C-E GB250	440	65
Grace-Bomac Drlg	27	del	1125	S/B N56	800	95
CAMPBELL						
Transcontinental Drlg-Denver	51	del	1100	Olwl 78	1300	125
DIVIDE						
Bird Drlg	4	del	450	C-E GB350	700	90
Brinkerhoff-Signal	5	del	1500	Nat 80	1500	150
Forwest	4	d-e	2000	Idco 1200	1600	160
Grace-Bomac Drlg	21	del	650	Idco H35SC	350	70
	39	del	1200	S/B N75	1200	125
Kenting Drlg	1	del	1500	Nat 80B	1500	150
Noble Drlg	N-89	del	800	Nat 80B	800	130
Transcontinental Drlg-Denver	39	del	1100	G-D GD800	1300	135
West Wind Drlg	59	del		Nat 80B	1800	150
Westburne Drlg	62	del	1050	Nat 50A	1200	110
DUNN						
Brinkerhoff-Signal	74	del	1500	G-D GD800	1500	150
Drilcon	2	del	1176	Nat 80B	1176	145
Grace-Bomac Drlg	33	del	1650	Olwl 96	1650	140
	52	del	1650	Nat 80B	1650	160
	53	del	1650	Nat 80B	1650	160
Noble Drlg	OW-861	del	2400	Olwl 860	2400	180
Transcontinental Drlg-Denver	81	del	1000	G-D GC800	1470	150
Westburne Drlg	59	del	1100	Idco M750D	800	100
EMMONS						
Cardinal Drlg	12	del	560	SOS 6000	480	65
GOLDEN VALLEY						
Dixilyn-Field Drlg	36	del	1600	Nat 80UE	1800	150
	37	del	1600	Nat 80UE	1800	150
Noble Drlg	814	del	1606	Nat 80B	1606	150
McKENZIE						
Alco Drlg	10	d-e	2000	Nat 80UE	1000	150
Bird Drlg	7	del	615	U36A	800	115
Blocker Drlg Canada	1	del	1000	OIME 1500SL	1500	180
	11	del	1000	Nat 80B	1500	150
	2	del	1000	OIME 1000SL	1500	180
	3	del	770	OIME 750SL	1155	140
	5	del	800	S/B N75	1200	130
	6	del	770	OIME 750SL	1155	140
Blocker Drlg-Houston	51					180
	52					160
	53					140
	54					140
	55					140
Brinkerhoff-Signal	10	del	1000	MC U40	1000	130
	65	del	1000	Nat 80B	1000	160
	80	del	1500	Nat 80B	1500	180
Burris Drlg	101	del	1500	G-D 1100M	1500	200

NORTH DAKOTA (Cont'd)

• Contractor	Rig No. •	Type Power •	Total HP All Main Mud Pumps •	Drawworks Make And Model •	Total HP Available to Drawworks •	Rated Depth With 4½-in. Pipe, 100 ft. •
McKENZIE (Cont'd)						
Drilcon	3	del	784	Nat 50A	784	100
	4	del	1800	Nat 110	1800	150
Dual Drlg	27	del	1900	C-E D3	1000	180
Grace-Bomac Drlg	25	del	1650	Nat 80B	1650	150
	26	del	1125	G-D 500M	800	90
	36	del	1650	Nat 80	1650	150
	38	del	1100	G-D 700M	1100	125
	40	del	1100	Olwl 76	1100	130
	41	del	700	S/B N7	700	100
	47	del	1650	Nat 80B	1650	160
	48	del	1650	G-D 800M	1650	160
	51	del	2400	Nat 110M	2400	200
	54	del	1200	Nat 610	1200	125
	55	del	1650	G-D 800M	1650	160
	57	del	1650	G-D 800M	1650	160
	58	del	1650	Nat 80B	1650	160
Helmerich & Payne Intl Drlg	15	del	1230	Olwl 76	1365	150
Kenting Drlg	14	del	1500	Nat 80B	1500	150
	2	del	1200	MC U40	1200	140
	30-E	d-e	2000	Nat 80UE	1000	150
	6	del	1500	S/B N85	1500	150
Nicor Drlg	27	del	1850	S/B N95	1200	160
	59	del	1400	Nat 55M	700	145
Noble Drlg	N-610	del	1606	Nat 80B	1606	150
Penrod Drlg	104		2000	Nat 80B	1700	150
	105	del	1575	Nat 80B	1700	150
Ratliff Drlg	6	del	1650	C-E GB800	1650	170
Shelby Drlg	52	del	1500	OIME SL7	1500	160
Tierra Drlg	14	d-e	1000	BDW 800MX	750	140
Transcontinental Drlg-Denver	50	del	820	G-D GD800	1470	135
True Drlg	17	del	1350	Nat 50A	1000	120
	21	del	1800	Nat 80B	1800	150
	23	del	1800	MC U712A	1800	160
West Wind Drlg	52					
	56	del		Nat 80B	1800	150
Westburne Drlg	63	del	1000	OIME SL7	1400	150
McLEAN						
Dual Drlg	3	del	1500	Wils 120	1650	150
MOUNTRAIL						
Blocker Drlg Canada	4	del	770	OIME 750SL	1155	140
Grace-Bomac Drlg	60	del	1650	Nat 80B	1650	160
SHERIDAN						
Cardinal Drlg	35	del	560	SOS 6000S	480	75
SLOPE						
Grace-Bomac Drlg	46	del	1200	Nat 610	1200	125
STARK						
Burris Drlg	103	del	1000	G-D 700	1000	145
Cardinal Drlg	9	del	720	Nat 50CA	720	115
Cliffs Drlg	14	del	1200	C-E J1250	900	150
Energy Operating Corp	2	del	1600	Nat 610M	2100	140
	4	del	1600	Nat 610M	2100	140
Enopco	2	del	1890	Nat 610	1080	130
	4	del	1890	Nat 610	1080	130
Grace-Bomac Drlg	45	del	1650	G-D GD800	1650	160
	49	del	1650	G-D 800M	1650	160
WILLIAMS						
Anderson-Myers Drlg	16	del	2300	Nat 55	1200	130
Brinkerhoff-Signal	77	del	1500	G-D 800M	1500	135
Challenger Drlg	22	del	1400	Nat 110	1800	180
Cliffs Drlg	36	del	1700	C-E JB1250	1650	180
Grace-Bomac Drlg	30	del	1650	Olwl 96	1650	180
	34	del	700	S/B N7	700	100
	35	del	2400	Nat 110M	2400	200
	42	del	1100	G-D 700M	1100	125
Nicor Drlg	25	del	1600	Nat 125	1200	150
	26	del	1100	Nat 50A	425	115
Noble Drlg	E552	del	800	C-E A550	800	130
Pruet-Ram-Co	1	d-e	2000	C-E D3	2000	180
	2	del	3000	C-E C1	3000	200
	3	del	1800	C-E D2	1200	150
	5	del	1800	C-E D2	1200	140

OHIO

• Contractor	Rig No. •	Type Power •	Total HP All Main Mud Pumps •	Drawworks Make And Model •	Total HP Available to Drawworks •	Rated Depth With 4½-in. Pipe, 100 ft. •
ASHTABULA						
P E P Drlg	2	del	500	Idco H35S	350	65
COLUMBIANA						
Armstrong Drlg	27	del		Wils Mogul 42	280	75
GEAUGA						
P E P Drlg	4	del	550	G-D 500	500	70
	8	del	550	G-D 500	500	100
HOCKING						
Beverly Drlg	1	del	2800	Idco	600	60
Wilson Inc, Lee	11	del	300	Idco H35	300	50

OHIO (Cont'd)

Contractor	Rig No.	Type Power	Total HP All Main Mud Pumps	Drawworks Make And Model	Total HP Available to Drawworks	Rated Depth With 4½-in. Pipe, 100 ft.
MEDINA						
Miller Contract Drlg	21	dsl	425	S-H 6000	425	70
MORROW						
Sheldon & Son, R H	1	dsl	450	W-N 25040	350	60
NOBLE						
Mid Atlantic Oil	1	dsl	400	Idco Rambler 5525	400	70
	2	dsl		Idco Rambler 5525	400	70
	3	dsl				
PORTAGE						
P E P Drlg	1	dsl	550	S/B N45	450	75
	3	dsl	650	Nat T45	600	75
	7	dsl	550	C-E WS1	470	75
SUMMIT						
Armstrong Drlg	10	dsl	380	May 3000 Port	350	40
TRUMBULL						
Armstrong Drlg	11	dsl	380	Cbot	380	75
WAYNE						
Armstrong Drlg	12	dsl	380	May 3000	318	40

OKLAHOMA

Contractor	Rig No.	Type Power	Total HP All Main Mud Pumps	Drawworks Make And Model	Total HP Available to Drawworks	Rated Depth With 4½-in. Pipe, 100 ft.
UNDESIGNATED						
Ardmore Drlg	2	gas	700	Wils GIANT	700	90
	3	gas	1350	Idco M10000	1350	125
	5			Idco		185
Baltic Drlg	10	dsl	940	Sup 700	600	95
Bighorn Drlg	1	dsl	1200	Nat 370	900	90
	3	dsl	800	Idco H37	500	65
	4	dsl	1000	MC U15	1000	100
	5	dsl	1200	MC U15	1000	100
Blocker Drlg-Houston	20					90
	25					120
	26					140
Cimarron Oper	3	dsl	1230	Idco H725	950	100
	4	dsl	920	Idco BIR5525	450	65
Forex Neptune and/or Affil	51	d-e	3200	G-D 1500E	2000	217
	54	d-e	3200	G-D 1500E	2000	217
FWA Drlg	31	dsl	1000	Wils Mogul 42	750	75
Kingery Drlg	10	gas	300	Wils Giant	300	50
Layton Oil	6	dsl	250	Wils Double Drum	250	30
Plotner Drlg	2	dsl	1000	All Rig 1200	2000	200
Quanza Drlg	1	dsl	300	Nat 300B	300	55
	2	dsl	250	S/B N4	450	45
Roberson Drlg	1	gas	600	C-E	400	70
Santa Fe Drlg	SFDLI-20	d-e	3400	Olwl E2000	2000	250
	SFDLII-21	d-e	2000	Nat 110UE	1500	170
	SFM 1	dsl	920	Nat 50A	450	110
	SFM 11	dsl	1800	G-D 800	1000	150
	SFM 12	dsl	2050	G-D 800	1000	150
	SFM 14	dsl	1450	BDW 800MI	800	150
	SFM 15	dsl	1450	BDW 800MI	800	150
	SFM 2	dsl	1400	Idco ED900	900	140
	SFM 3	dsl	1250	OIME 1000SL	900	140
	SFM 4	dsl	1550	OIME SL1500	1500	140
	SFM 5	dsl	1200	OIME SD5	750	120
	SFM 6	dsl	1200	OIME SL7	900	180
	SFM 7	dsl	1200	OIME SD5	750	120
	SFM 8	dsl	2700	OIME SD7E	900	200
	SFM 9	dsl	1600	BDW 800MX	800	180
	SFW-15	d-e	1600	C-E C111	2000	300
	SFW-17	d-e	1300	Nat 100	2000	140
	SFW-18	d-e	1700	Olwl E2000	2000	250
	SFW-19	d-e	3400	Olwl E2000	2000	250
	SFW-22	d-e	2600	Nat 110UE	1500	170
	95	d-e	2800	Olwl E2000	1500	200
Scott Drlg, Jerry	4	dsl	600	Beth C50	640	100
Westburne Drlg Canada	67	dsl	1725	Olwl 96	1725	200
	68	dsl	1950	MC U1220D	1950	200
	70	dsl	1050	Nat 50A	700	85
	71	dsl	1580	Olwl 880	1580	180
ALFALFA						
Damac Drlg	2	dsl	310	Wils Giant	310	68
Dean Drlg	1	dsl	1100	Idco H40	1000	110
Thomas Drlg	2	dsl	300	Nat T32	300	73
Vaughn Grand Drlg	3	dsl	500	Coop 600	500	90
BEAVER						
Eagle Drlg	2	dsl	1000	Nat T45	725	95
	4	dsl	1100	MC U15	850	100
Robinson Bros Drlg	19	dsl	600	Olwl 52T	3000	80
Sage Drlg	6	dsl	400	C-E 350	400	85
	7	dsl	400	BDW 450	400	90
Service Drlg (TX)	9	dsl	1000	MC 800	800	100
Tried Drlg	9	dsl		BDW 650	800	120

OKLAHOMA (Cont'd)

Contractor	Rig No.	Type Power	Total HP All Main Mud Pumps	Drawworks Make And Model	Total HP Available to Drawworks	Rated Depth With 4½-in. Pipe, 100 ft.
BECKHAM						
Atco Drlg Southern	14	d-e	3200	Nat 1320E	2000	220
Big Chief Drlg	37	gas	1350	C-E J1250	1350	180
	45	dsl	1500	S/B N95A	2250	180
Challenger Drlg	7-E	dsl	900	Nat 80E	1000	140
Continental Drlg	15	d-e	2000	Idco ED1200	1200	160
	33	d-e	2600	Idco E1700	1700	190
	35	d-e	2600	Idco E1700	1700	190
	8	d-e	2600	Idco E1700	1700	190
	9	d-e	2000	Idco ED1200	1200	180
Dual Drlg	35	dsl	2000	C-E D3	1000	180
Grace/T R G Drlg	10	d-e	3000	G-D 3000E	3000	300
	130	d-e	2200	G-D 1100E	2400	180
	141	d-e	2200	G-D 1500E	2400	220
	18	d-e	2200	G-D 1500E	2400	220
	20	d-e	2200	G-D 1100E	2400	180
	5	dsl	1400	Nat 75	1305	130
Helmerich & Payne Intl Drlg	46	dsl	1100	C-E GB800	1210	150
	94	d-s	2000	Nat 110ME	1500	200
Loffland Bros	102	d-e	3300	MC U1220EBD	3300	280
	317	dsl	2250	G-D 1500	2500	240
	34	d-e	3500	MC U1220	2500	280
Moran Bros	66	dsl	1300	S/B N75A	750	150
Parker Drlg	149	gas	1000	Nat 75	1000	160
	167	dsl	1650	OIME SL1500	1650	200
	178	dsl	2200	OIME SL1500P	2200	220
	182	dsl	3000	OIME Hercules 3000E	3000	300
	192	gas	1200	OIME 1000	1200	180
	201	dsl	4800	OIME E4000	4000	500
	212	dsl	3200	OIME 2000	2000	250
	54	gas	1800	Nat 130	1800	250
Penrod Drlg	126	dsl	1000	Nat 80B	1760	150
	129	dsl	1000	Nat 80B	1760	150
	130	dsl	1000	Nat 80B	1760	150
	26	dsl	2600	C-E C2	1950	250
	8	dsl	2600	Nat 1320M	3425	250
Ratliff Drlg	5	dsl	1100	Nat 75CS	1100	150
Robinson Bros Drlg	24	d-e	3200	C-E Electra Hoist	2000	250
	25	dsl	3000	OIME SL7	3000	200
Rowan Drlg US	18	dsl	3200	C-E A1500	2500	300
	7	dsl	3200	C-E A1500	2500	220
	9	d-e	2600	Nat 1625DE	2000	250
Santa Fe Drlg	15W					
	7	d-e	2600	C-E C111	2700	300
Sharp Drlg	39	dsl	2331	Olwl M2000	2742	300
	40	dsl	1770	Olwl 96	2025	180
	52	dsl	1580	Beth M810	1836	190
	58	dsl	2319	Olwl 96	2607	230
	71	d-e	2331	MC U914EC	2742	235
Tri-Land Drlg	1	dsl	1500	G-D 1500E	2000	210
Tri-Service Drlg	9	dsl	2475	Nat 1320M	2475	220
Trigg Drlg	7	dsl	1200	S/B N65	1600	200
	8	dsl	1200	Nat 125	1600	200
U R C Drlg	4	d-e	1500	MC 914C	1500	220
	5	dsl	2250	MC 1220	2250	250
Unit Drlg & Expl	12	d-e	1350	G-D 1500	2000	250
BLAINE						
Atco Drlg Southern	16	d-e	3200	Nat 110UE	1500	180
	9	d-e	3200	Nat 110	1500	180
Cimarron Oper	2	dsl	1230	Idco H725	950	100
	5	dsl	1230	Idco BIR7015	608	85
Cothrum Drlg	15					
Eason Oil	17	dsl	2300	C-E C1	1500	210
Energy Operating Corp	7	dsl	2000	Nat 80B	1800	180
Enopco	7	dsl	1800	Nat 80B	1800	180
FWA Drlg	19	dsl	1600	Wils Titan	1040	140
Quarles Drlg	10	dsl	2700	MC U914C	2400	220
Sage Drlg	6	dsl	900	BDW 650	800	120
Santa Fe Drlg	11M	dsl	1000	G-D 800M	1000	160
	12M	dsl	1000	G-D 800M	1000	160
	2M	d-e	750	Idco E900	900	40
	6M	dsl	1000	OIME S/L 7	1500	160
	7M	dsl	600	OIME SD-5	784	120
Trigg Drlg	2	g-b	700	Nat 75	900	120
Viersen & Cochran Drlg	2	dsl	600	Nat 55	800	120
BRYAN						
Basin Drlg	5	dsl	600	C-E D2	820	130
Grace/T R G Drlg	1	dsl	1245	Nat 75	1305	135
Moran Drlg, E W	21	dsl	1600	Wils 120	1100	150
CADDO						
Arden Drlg	7	dsl	1700	OIME SL7	1500	150
Big Chief Drlg	46	d-e	3000	C-E Electrohoist III	4200	250
	47	d-s	4000	G-D 3000E	3000	350
	9	dsl	1200	Idco H35S	700	100
Brinkerhoff-Signal	15	dsl	2000	G-D 1500	2000	200

OKLAHOMA (Cont'd)

Contractor	Rig No.	Type Power	Total HP All Main Mud Pumps	Drawworks Make And Model	Total HP Available to Drawworks	Rated Depth With 4½-in. Pipe, 100 ft.
CADDO (Cont'd)						
Cactus Drlg Co	33	dsl	1580	Nat 110	1740	180
Challenger Drlg	71	dsl	4000	G-D 2100E	2000	220
Continental Drlg	34	d-e	3200	Idco E2100	2100	250
Dual Drlg	20	dsl	2800	Olwl 860	1400	220
	32	dsl	2800	Olwl 840	1500	220
	33	dsl	2800	Olwl 840	1500	220
Durkee Drlg	4	d-e	4000	Sup 2000UE	2000	250
Eason Oil	22	d-e	2600	C-E C1E	1500	210
Energy Operating Corp	1	dsl	2800	Nat 110M	2700	200
	5	dsl	2000	Nat 80B	1800	180
	6	dsl	2800	Nat 110M	2700	200
Enopco	1	dsl	2430	Nat 110M	2430	200
	5	dsl	1800	Nat 80B	1800	180
	6	dsl	2700	Nat 110M	2700	200
Exeter Drlg	44	dsl	900	MC U36	900	120
	55					
Grace/T R G Drlg	11	d-e	2000	G-D 1100E	2400	180
	133	d-e	2000	G-D 1100E	2400	180
	134	d-e	2200	G-D 1500E	2400	220
	135	d-e	2200	G-D 1500E	2400	220
	136	d-e	2200	G-D 1500E	2400	220
	137	d-e	2200	G-D 1500E	2400	220
	22	dsl	1290	Nat 80B	1305	145
Helmerich & Payne Intl Drlg	76	dsl	1650	Olwl 760	1815	165
Lagersen Drlg	7	d-e	2000	C-E CIE	2500	220
Mercury Drlg	10	dsl	1000	G-D 800	2000	180
	7	dsl	1000	G-D 800M	2000	180
Moran Drlg, E W	10	d-e	2600	G-D 1500	2000	250
	22	d-e	3200	C-E C3	3000	300
	25	d-e	3200	G-D 3000E	3200	400
	27	d-e	3200	G-D 1500E	2000	250
Murco Drlg	42	d-s	2800	Olwl E2000	2000	250
Nicor Drlg	10	dsl	2000	MC U914C	1400	180
	11	dsl	2100	MC U1220B	2000	210
	12	dsl	1050	G-D 700M	800	130
	30	dsl	2000	MC U914C	1400	180
	33	d-e	2000	MC U914EC	1400	210
	35	d-e	2000	MC U914EC	1400	210
	41	dsl	1000	G-D 1100M	1500	210
	69	dsl	2700	MC U1220EB	2000	250
Noble Drlg	GD1	dsl	3135	G-D 1500	3135	220
	N-117	dsl	3645	Nat 110UE	3645	200
	N-133	el	3300	Nat 1320UE	1320	250
Parker Drlg	172	dsl	1650	OIME SL1500P	1650	200
Penrod Drlg	133	dsl	1600	Nat 1625DE	4610	200
Pilgrim Drlg	3	d-e	2500	Idco Z100E	2500	250
Quarles Drlg	11	dsl	2700	MC U914C	2400	220
Resource Drlg	C-3	dsl	1040	Nat 610	1220	120
	9	dsl	2330	Nat 110	2740	180
Robinson Bros Drlg	Gary Jack	d-e	2000	G-D	2000	180
	20	dsl	1000	S/B N95	300	200
Sandia Drlg	1	dsl	3000	G-D E800	3000	180
Santa Fe Drlg	20-W	d-e	3400	Olwl E2000	2000	250
	4M	dsl	1500	OIME SL 1500	1500	180
Schlenske Drlg	11	dsl	2400	G-D 1100M	2400	200
Top Drlg	7	d-e	2000	Olwl 760E	1000	200
Tri-Service Drlg	10	dsl	1800	Olwl 860	1600	210
Unit Drlg & Expl	20	dsl	1000	G-D 700	1300	180
Viersen & Cochran Drlg	6	dsl	2000	Beth 1013	2400	250
Westburne Drlg	64	dsl	1680	MC U914C	1680	180
	67	dsl	1725	Olwl 96	1725	190
	68	dsl	1600	MC U1220	1875	200
	71	dsl	1580	Olwl 880	1580	180
CANADIAN						
ACT Drlg	1	dsl	1750	G-D 6D 800	1000	160
	2	dsl	1750	Nat 125	1950	230
	[illegible]	dsl	800	Wils 42	700	100
Basin Drlg	6	dsl	600	S/B N7	820	100
Bonray Drlg	22	dsl	800	Idco H525	800	95
	4	dsl	900	MC U40	900	140
Drillers	27	dsl	700	C-E GB500	750	100
Exeter Drlg	50	gas	700	S/B N75	900	140
	52	dsl	850	S/B N75	850	150
Loffland Bros	111	d-e	3300	C-E A1500	2200	240
Mercury Drlg	15	dsl	1300	Nat T1320M	2800	250
Moran Bros	31	d-e	2900	Idco E2500	2500	250
	33	d-s	2300	Nat 110UE	1500	200
	35	d-e	1700	Olwl 76	1000	150
	36	d-s	2300	S/B N12	1500	200
Noble Drlg	N-83	dsl	1530	Nat 80B	1530	150
ONEOK Drlg	1	d-m	900	MC U15	950	130
Ratliff Drlg	8	g-b	1020	Nat 50A	1020	100
Robinson Bros Drlg	5	dsl	1000	Olwl 86	900	110
Santa Fe Drlg	1M	dsl	800	Nat 50A	800	120
	3M	dsl	1100	OIME SL 1000	1100	140
	5M	dsl	600	OIME SD-5	784	120
Tried Drlg	3	dsl		S/B N55	800	120
	5	dsl		Idco Super 750	1100	140
U R C Drlg	2	dsl	1100	Nat 100	1100	150
	3	dsl	880	MC U36A	880	125
	6	dsl	1600	Idco BIR7585		105
Unit Drlg & Expl	8	dsl	1000	Nat 55	1500	150
Warrior Drlg	5	dsl	2000	BDW	1200	150

OKLAHOMA (Cont'd)

• Contractor	Rig No. •	Type Power •	Total HP All Main Mud Pumps •	Drawworks Make And Model •	Total HP Available to Drawworks •	Rated Depth With 4½-in. Pipe, 100 ft. •
CARTER						
Arden Drlg	6	d-e	3200	C-E C3	3000	350
Ardmore Drlg	1	dsl	450	Idco H30-D	450	50
	4	gas	600	Wils	400	500
Big Chief Drlg	12	gas	1600	Nat 80B	1600	140
Cliffs Drlg	42	d-e	2600	Nat 1320UE	3025	250
Fossil Drlg	2	dsl	1350	G-D 500M	900	120
Johnson Bates Drlg	14	dsl	700	MC U15	450	75
Jones Drlg Corp	8	gas	700		700	120
	9	gas	816		800	140
Little-Deutag	T-11	dsl	1700	Nat 80B	1000	154
	T-12	dsl	1300	Idco H525D	670	80
Nicor Drlg	42	d-e	2000	MC U914EC	1400	210
Parker Drlg	215	gas	2200	OIME SL1500	2200	220
CIMARRON						
Service Drlg (TX)	3	dsl	300	MC U34	400	65
CLEVELAND						
Fossil Drlg	1	dsl	1150	C-E GB350	800	100
Top Drlg	6	dsl	350	Nat T32	350	75
COMANCHE						
Bonray Drlg	9	d-e	3000	Olwl E2000	2000	250
Continental Drlg	10	d-e	3200	Idco E2100	2000	250
	13	d-e	2000	Idco ED1200	1200	160
	4	d-e	3200	Idco E2100	2000	250
	7	d-e	3200	Idco E3000	3000	300
Drillers	48	d-e	3600	Idco E3000	3000	300
Eason Oil	23	d-e	3200	C-E C3E	3000	300
JFP Well Serv	8	dsl	2000	Olwl E2000	2000	250
Loffland Bros	18	d-e	2600	MC U1220EB	2200	280
	19	d-e	3200	C-E C3000	3300	350
	200	d-e	3300	C-E 3000 Type II	3300	500
Mercury Drlg	5	dsl	1350	G-D 1100	2775	220
Nicor Drlg	29	d-e	2700	G-D E1500	2000	250
	45	d-e	2700	MC U1220EB	2000	250
	47	dsl	2600	C-E C3E	2000	250
	70	dsl	2700	G-D 1500E	2000	250
Parker Drlg	193	dsl	3200	OIME 3000E	4000	350
	203	dsl	2600	OIME E2000	2000	250
Penrod Drlg	118	dsl	1600	Nat 1625M	3000	300
	127	dsl	1000	Nat 80B	1760	150
	21	dsl	2600	Nat 1320M	1950	150
	3	dsl	2600	Nat 1320M	3425	250
Ratliff Drlg	1	dsl	2640	Olwl 96	2640	240
	20	dsl	3600	UIZZOEB	2500	300
Robinson Bros Drlg	23	d-e	3200	C-E C2	2000	260
Sandia Drlg	4	dsl	4000	C-E C1	4000	220
Santa Fe Drlg	22W					
CREEK						
Mar-Tay Drlg	1	dsl	450	Crwdll K200C	350	50
Whitehead Drlg Contr	1	dsl	450	Wils Model 30	425	40
Winter Drlg & Expl	4	dsl				
CUSTER						
Arden Drlg	1	d-e	1600	C-E D2	1200	160
	13	dsl	1600	Idco H7-11	700	120
	9	d-e	2000	C-E D2	1000	140
Bates-Great Western Energy	6	dsl	1560	MC U20	1040	160
Continental Drlg	16	d-e	2000	Idco ED1200	1200	160
	32	d-e	2600	Idco E1700	1700	190
Cothrum Drlg	18					
Drillers	30	dsl	800	Unit U15M	1000	110
	42	d-e	3000	C-E Electrohoist	3000	250
Durkee Drlg	3	d-s	4000	Sup 2000UE	2000	250
Eason Oil	18	d-e	2300	C-E C1E	1500	210
FWA Drlg	34	dsl	2200	Olwl 760	1560	150
Grace/T R G Drlg	17	d-e	2200	G-D 1500E	2400	220
Harper-Turner Drlg	11	dsl	2000	Nat 110	1500	200
Helmerich & Payne Intl Drlg	49	dsl	1850	Nat 110	1815	180
Lanex Drlg	B-15	d-s	2000	C-E D3	1000	160
	B-16	d-s	2000	G-D 800E	1000	160
	B-18	d-s	2700	G-D 1100E	1500	200
	B-20	d-s	2600	C-E EHII	2000	200
Loffland Bros	196	d-e	3300	MC U1220	2200	280
	20	d-e	3200	C-E C3000	3000	350
	244	d-e	2500	MC U1220E	2200	280
	32	d-e	4000	C-E CE3000	3300	350
Magic Circle Drlg	17	dsl	2460	Olwl 96	2460	200
Moran Drlg, E W	11	dsl	2600	Wils 150A	1650	200
	4	dsl	1600	Wils 120	1100	150
	5	dsl	1850	Wils 120	1100	180
Nicor Drlg	1	dsl	1500	MC U20	1200	150
	56	d-e	2700	MC U1220EB	2000	250
	64	d-m	1700	C-E GB800	1000	150
ONEOK Drlg	11	dsl	2000	Nat 100	1000	200
	12	d-e	2000	Olwl 840E	2000	180
	8	dsl	835	S/B N55	950	135
Parker Drlg	210	dsl	2200	OIME 1500B	2200	220
	205	dsl	2200	OIME 1500C	2200	220
Quarles Drlg	14	dsl	2700	MC U914C	2400	220
	8	dsl	2000	OIME SD 7E	1000	220
	9	dsl	2000	OIME SD 7E	1000	220

OKLAHOMA (Cont'd)

• Contractor	Rig No. •	Type Power •	Total HP All Main Mud Pumps •	Drawworks Make And Model •	Total HP Available to Drawworks •	Rated Depth With 4½-in. Pipe, 100 ft. •
CUSTER (Cont'd)						
Resource Drlg	RD-21	dsl	2330	Nat 110	2740	180
	RD-27	dsl	1560	Nat 80B	1835	140
	7	dsl	1560	Nat 80B	1835	140
Robinson Bros Drlg	7	d-e	1750	Nat 80UE	1500	120
Santa Fe Drlg	14M	dsl	700	BDW 800	1000	140
	15M	dsl	750	BDW 800	1000	140
	17-W	dsl	1300	Nat 110	1500	160
	17W					
	21W					
	9M	dsl	600	BDW-800MX	1500	180
	95W					
Slawson Drlg	8	dsl	750	Idco H725	750	115
Top Drlg	1	dsl	650	S/B N7	900	100
Tri-Service Drlg	12	d-s	3300	Olwl E2000	2000	250
Triad Drlg	10	dsl		G-D 700	1100	150
Unit Drlg & Expl	25	dsl	600	G-D 700	1300	160
	26	gas	600	Nat 75	600	150
Viersen & Cochran Drlg	15	dsl	1010	Olwl 660	830	130
	17	dsl	600	Olwl 660	830	120
Warrior Drlg	2	dsl	1600	S/B 75	1200	150
Wilson Bros Drlg	1	d-e	2600	Idco E2100	2100	210
	14	dsl	2600	Nat 110	2700	200
	15	dsl	2600	Nat 110	2700	200
	16	dsl	2600	Nat 1320	2700	300
	17	dsl	2600	Nat 110	2700	200
	18	dsl	1300	Nat 110	3300	200
	19	dsl	800	Nat 80B	1425	160
	21	dsl	800	Nat 80B	1425	160
	22	d-e	2800	Olwl E2000	2000	250
DEWEY						
Apollo Drlg Inc	2	dsl	1500	Nat 80B		160
Arden Drlg	2	dsl	800	C-E WS1	800	120
Beard Drlg (OK)	3	dsl	1379	MC U10	1029	140
Brinkerhoff-Signal	68	dsl	700	Nat 55	700	125
Cactus Drlg Co	3	dsl	1560	Nat 80B	1800	150
Drillers	39	d-e	1200	Idco 700E	1000	140
Eagle Drlg	3	dsl	1100	BDW 800	1500	140
Eason Oil	21	d-e	2000	C-E D2	750	130
Exeter Drlg	49	dsl	900	MC U3657	1000	120
FWA Drlg	5	dsl	1400	Wils Giant	850	115
Harper-Turner Drlg	1	dsl	800	Nat 55	1000	120
Helmerich & Payne Intl Drlg	55	dsl	1100	Nat 55	1210	140
	84	d-s	1700	Olwl 760E	760	160
Loffland Bros	73	d-e	2160	MC U712A	2200	180
Mercury Drlg	1	dsl	1000	C-E 800	1470	160
	6	dsl	1000	C-E 500	1470	140
Robinson Bros Drlg	GBL	dsl	1250	Idco 1200	1000	120
Schiensker Drlg	10	gas	900	G-D 800M	1350	160
Seneca Drlg	3	d-e	800	MC U36EA	800	140
Top Drlg	4	dsl	1200	Olwl 660	1200	140
Triad Drlg	4	dsl		S/B N7	800	110
Unit Drlg & Expl	22	gas	495	Nat 50	600	100
	24	dsl	600	G-D 800	1200	150
Viersen & Cochran Drlg	12	gas	500	Nat 50	800	90
	20	dsl	1245	Nat 610	1245	130
DUNCAN						
Adeco Drlg & Engr	17		690	OIME SL750	1035	140
ELLIS						
Bonray Drlg	21	dsl	990	Idco H750	660	120
Exeter Drlg	53	gas	1000	S/B 75	1000	150
Forex Neptune and/or Affil	48	d-e	3200	G-D 1100E	1500	180
Grace/T R G Drlg	2	dsl	825	G-D 500M	870	100
Hickman Drlg	3	dsl	1200	BDW 650	800	120
	5	dsl	1450	BDW 800	1100	150
	6	dsl	1450	BDW 800	1100	150
Moran Bros	37	dsl	1000	Nat 610	750	120
Moran Drlg, E W	7	dsl	1600	G-D 700	800	130
Murco Drlg	30	dsl	2800	Olwl N200B	3000	250
Nicor Drlg	63	dsl	2650	Olwl 96	1500	180
Robinson Bros Drlg	12	dsl	800	G-D 700	1000	[illegible]
	14	dsl	900	Nat 50	800	110
	21	dsl	1500	BDW 650M	1300	140
Sage Drlg	5	dsl	400	Nat T32	400	67
Unit Drlg & Expl	11	dsl	1100	G-D 700	1300	150
	2	dsl	700	MC U15	800	125
GARFIELD						
Arden Drlg	14	dsl	1300	Nat SS	700	120
Bodard & Hale Drlg	12	dsl	450	MAC 400	525	75
Harper-Turner Drlg	4	dsl	600	Nat 50	820	90
Hughes Drlg	1	dsl	550	Idco H35	475	80
	10	dsl	550	Cbot 550	475	80
	2	dsl	550	Idco H35	475	80
	3	dsl	1100	Idco 725	900	130
	4	dsl	600	Idco H44	700	90
	5	dsl	550	Idco H35	400	62
	7	dsl	550	Idco H37	475	80
	9	dsl	550	Cbot 550	475	80
Iron Drlg	1	dsl	500	MC U35A	450	70
	2	dsl	900	MC U15	800	90
	3	dsl	1050	Beth S45E	800	80

OKLAHOMA (Cont'd)

• Contractor	Rig No. •	Type Power •	Total HP All Main Mud Pumps •	Drawworks Make And Model •	Total HP Available to Drawworks •	Rated Depth With 4½-in. Pipe, 100 ft. •
GARFIELD (Cont'd)						
Logan Drlg	4	dsl	1200	BDW 650	900	100
Nicor Drlg	14	dsl	625	G-D 500M	650	100
	19	dsl	1650	Idco 750	750	150
	5	dsl	1000	Beth C50	450	100
	8	dsl	755	Nat 50CA	425	110
ONEOK Drlg	6	dsl	875	MC U15	950	135
Sabre Drlg Div TRG Drlg	8	dsl	1050	MC U15	1050	90
Sumpter & Barker Drlg	1	dsl	930	Wils Mogul 4[illegible]	430	65
Thomas Drlg	8	dsl	300	Idco H35	300	75
GARVIN						
Bates-Great Western Energy	16	dsl	1000	BDW 800MX	1000	140
Big Chief Drlg	41	gas	1400	S/B N75	900	120
	42	dsl	1800	Nat 80	1800	150
	48	d-s	4000	G-D 3000E	3000	350
Bodard & Hale Drlg	7	dsl	550	Beth S55	600	80
	8	dsl	650	MC U36A	1100	135
Falcon Drlg	1	dsl	400	Beth S45A	400	70
Fossil Drlg	4	dsl	1300	MC U15	900	140
Johnson Bates Drlg	3	dsl	1100	MC U34	1100	105
Ratliff Drlg	7	g-b	1020	Nat 75CB	1020	150
Resource Drlg	RD-28	dsl	1040	Nat 610	1220	120
	RD-29	dsl	1560	Nat 80B	1835	140
Top Drlg	2	dsl	1200	Olwl 660	1200	140
GRADY						
Arden Drlg	3	dsl	2500	C-E C1	1500	200
	4	dsl	1800	C-E D2	1000	160
	8	dsl	3400	C-E CE3000	3000	300
Beard Drlg (OK)	2	gas	1200	MC U15	800	120
Big Chief Drlg	36	dsl	1400	Nat 55	900	110
	43	dsl	2000	Nat 80B	2250	160
Cactus Drlg Co	35	d-e	3220	Nat 110UE	3220	200
Challenger Drlg	72	dsl	4000	G-D 3000E	3000	300
Cothrum Drlg	19					
Crescent Drlg	1	dsl	400	Beth S45E	400	70
Culver Drlg	3	dsl	800	G-D 800	800	160
Dual Drlg	15	dsl	2600	Wils 150A	1650	190
	4	dsl	2400	Nat 110	1500	190
Durkee Drlg	2	d-s	2000	Sup 1000UE	1000	180
Grace/T R G Drlg	14	d-e	2000	G-D 1100E	2400	180
	75	d-e	2200	Nat 1320UE	2400	220
Helmerich & Payne Intl Drlg	55	d-s	1600	Nat 80UE	800	150
Loffland Bros	206	g-e	2160	MC U914B	2200	200
	99	gas	1300	MC U20	1300	150
M G F Drlg-Lafayette	46	dsl	1800	Idco S711	1500	180
Magic Circle Drlg	12	dsl	900	Nat 50A	900	120
	16	gas	1300	Beth M810	1300	160
Mercury Drlg	12	dsl	1000	G-D 800	2010	200
	3	dsl	1000	Olwl 96	2010	220
	8	dsl	1000	G-D M700	1470	170
Noble Drlg	OW-23	d-e	3750	Olwl E2000	2000	250
Parker Drlg	178	dsl	3000	OIME Hercules 3000E	3000	300
	186	dsl	2200	OIME 1500	2200	220
	196	dsl	3200	OIME E3000	4000	350
	213	dsl	2200	OIME SL1500	2200	220
Pilgrim Drlg	4	d-e	2000	Olwl 840EHD	2000	220
Ratliff Drlg	14	dsl	2640	MC U1220B	2640	280
Sandia Drlg	2	dsl	4000	C-E C1	4000	220
	5	dsl	2000	C-E D2	2000	160
Santa Fe Drlg	18-W	dsl	3200	Olwl E2000	2000	250
	19-W	dsl	2000	Olwl E2000	2000	250
	19W					
	8M	d-e	1500	OIME SD7E	2400	180
Thomas Drlg	1	dsl		S/B N42		110
Unit Drlg & Expl	10	dsl	1000	Beth M58	1300	155
	23	dsl	600	MC U15	600	100
Viersen & Cochran Drlg	10	dsl	2000	Nat 100	1040	170
	18	dsl	1000	Nat		
	4	dsl	600	Nat 55	800	120
Warrior Drlg	3	dsl	1800	Nat 100	1800	170
GRANT						
Cactus Drlg Co	57	dsl	520	Idco H35	454	65
Mendenhall Drlg	1	dsl	350	Fail 90	318	50
Thomas Drlg	5	dsl	425	Wils Giant	400	89
Vaughn Good Drlg	1	dsl	500	Coop 600	500	90
HARPER						
Beredco	1	dsl	800	MC U15	800	90
Challenger Drlg	3	dsl	700	Nat 50A	750	100
Damac Drlg	3	dsl	620	Wils Mogul	620	95
Drillers	36	dsl	600	C-E GB250	700	85
Gabbert-Jones	3	dsl	410	C-E 350	475	80
H30 Drlg	77	dsl	525	Idco H40	600	80
Moran Drlg, E W	24	dsl	920	S-H 7000	450	95
Rine Drlg	5	dsl	700	S/B N55	700	90
	7	dsl	750	G-D 700	750	135

OKLAHOMA (Cont'd)

• Contractor	Rig No. •	Type Power •	Total HP All Main Mud Pumps •	Drawworks Make And Model •	Total HP Available to Drawworks •	Rated Depth With 4½-in. Pipe, 100 ft. •
HASKELL						
Alexander Drig	1	dsl	800	MC U34	500	65
Grace Miller Drig	120	gas		S-H 7000		80
Moran Drig, E W	14	dsl	1600	Wils 150	1650	150
	16	dsl	920	S-H 7000	450	95
HUGHES						
R W I T Drig	2	g-l	690	MC U34	280	60
	8	g-l	601	MC U34	280	60
Rockwell Drig	20	dsl	670	MAC 350	550	65
	22	dsl	670	C-E G36	450	70
JACKSON						
Burns L D Drig	1	dsl	1360	Sea Coast 10004S	780	140
Lee Drig	2	dsl	850	BDW 450T	550	90
JEFFERSON						
Drillers	26	dsl	700	C-E GB500	700	100
Jones Drig Corp	14	dsl	1200		1200	140
	15	dsl	900		1000	140
	7	gas	700		750	120
Little-Deutag	T-37	dsl	1600	Coop LTO750	750	100
Moran Drig, E W	15	dsl	950	Beth S55	550	100
Noble Drig	N-85	dsl	1830	Nat 80B	1830	150
	N-87	dsl	1200	Nat 80B	1200	150
ONEOK Drig	5	dsl	860	Nat 50CA	950	100
Pilgrim Drig	1	dsl	750	Idco H35	600	120
	2	dsl	1500	Olwl 76	1500	160
	5	dsl	775	Nat 50CA	950	120
Ratliff Drig	9	gas	700	Nat 50A	1020	110
Roberson Drig	3	gas	700	MC U15	600	100
Thomas Drig	11	dsl	300	Wich R-6	300	60
KAY						
Kay Drig	1	dsl	480	S/B N4	480	60
KINGFISHER						
Astro Drig	15	dsl	912	Wils Super GI	912	105
	18	dsl	556	Idco H1000	940	120
	20	dsl	550	Cbot 550	456	85
	21	dsl	2500	Nat 100	1500	180
	28	d-e-s	2000	I-R 2550	1500	160
Beard Drig (OK)	1	gas	675	C-E G450	450	100
	4	dsl	1379	MC U10	1029	140
Cactus Drig Co	56	dsl	800	S/B N55	1000	90
Magic Circle Drig	15	dsl	900	MC U15	900	120
Maratan Resources	2					
Nicor Drig	28	dsl	700	MC U15	700	115
Robinson Bros Drig	3	dsl	1000	Wils 75	900	90
Thomas Drig	9	dsl	640	S/B N46	640	130
Vaughn Good Drig	2	dsl	1100	Coop 650	600	120
KIOWA						
Moran Drig, E W	30	d-e	3200	G-D 1500E	2000	250
Unit Drig & Expl	27	dsl	1600	G-D 1500	2400	250
LATIMER						
C E C Drig	2	dsl	1100	MC U15	800	100
Dual Drig	18	dsl	1850	Beth M-810	1100	150
	2	dsl	950	Wils Giant	650	95
Exeter Drig	46	dsl	900	S/B N75	900	140
Grace Miller Drig	102	gas	675	MC U15	675	120
	110	dsl	1500	OIME SL1500	1500	200
	117	dsl	1000	OIME SL7	1500	200
	122	dsl		BDW 800		150
Lanex Drig	A-15	d-s	2000	C-E D3	1000	160
	B-12	d-s	1600	C-E D2	750	130
Quarles Drig	1	dsl	1500	OIME 750	750	145
Unit Drig & Expl	17	dsl	700	S/B N75	1300	150
	29	dsl	1000	S/B N75	1200	160
LINCOLN						
R W I T Drig	9	g-l	610	Wils	280	60
Sabre Drig Div TRG Drig	6	dsl	450	Nat T20	335	60
LIVINGSTON						
Nicor Drig	49	d-e	3200	G-D 1500E	2000	250
LOGAN						
Basin Drig	1	dsl	600	G-D 500M	820	100
	10	dsl	600	G-D 500	820	100
	14	dsl	1470	G-D 700	1220	140
	2	dsl	600	G-D 500M	820	100
	3	dsl	500	G-D 500M	820	100
	4	dsl	1600	G-D 700M	820	140
	7	dsl	600	S/B N45	820	80
	8	dsl	750	C-E D2	820	130
	9	dsl	600	G-D 500	820	100
Bodard & Hale Drig	5	dsl	450	MC U34	425	65
Johnson Bates Drig	4	dsl	400	MC U34	375	65
Sabre Drig Div TRG Drig	4	dsl	600	Nat 370	525	75
Scott Drig, Jerry	7	dsl	350	Wils Giant	350	70
Smith Bros Drig	7	dsl	450	Cbot 5000	450	50
	8	dsl	725	RMI 800	800	100
	9	dsl	1200	Wils 75	950	125
LOVE						
Arbuckle Drig	1	dsl	450	BDW 450T	600	90
Nicor Drig	6	dsl	1500	Nat 55	700	135
Thomas Drig	6	gas	600	Nat 50A	600	130
McCLAIN						
Culver Drig	16	dsl	800	G-D 700	800	140
Exeter Drlt	48	dsl	1000	BDW 800MI	900	150
Harper-Turner Drig	2	dsl	800	Nat 50	820	105
Moran Drig, E W	1	dsl	1700	G-D 700	800	150
Nicor Drig	2	dsl	1300	MC U15	700	120
ONEOK Drig	10	dsl	1000	MC U20	1500	180
	7	d-e	1500	MC U20	1000	160
	9	dsl	820	MC U15	980	130
Quarles Drig	7	dsl	1050	Nat 750A	800	140
Ratliff Drig	2	gas	1020	Nat 55	1020	140
Scott Drig, Jerry	6	dsl	1342	MC U15	1342	105
	8	dsl	1520	MC U15	1000	110
Trigg Drig	4	dsl	700	Nat 75	950	120
MAJOR						
Bonray Drig	6	dsl	700	Nat 50A	700	90
Cimarron Oper	1	dsl	750	Idco BIR5525	450	65
FWA Drig	21	dsl	1000	Wils Mogul 42	720	100
	9	dsl	1150	Wils Giant	720	115
Thomas Drig	4	dsl	600	C-E 500	600	102
Top Drig	3	dsl	400	Olwl 500	450	85
U R C Drig	1	dsl	860	Nat 50	860	100
Viersen & Cochran Drig	22	dsl	1245	Nat 610	1245	120
Warrior Drig	1	dsl		C-E	400	50
MARSHALL						
Moran Drig, E W	8	dsl	2200	Wils 150A	1650	150
MURRAY						
Leeman Drig	1	dsl	500	Coop 550	525	80
NOBLE						
Bodard & Hale Drig	6	dsl	600	Nat T20	450	65
Bonray Drig	7	dsl	476	Coop 66	318	60
Fisher Drig	1	dsl	400	S/B N4	400	60
Harper-Turner Drig	12	dsl	600	Coop	700	90
McLennan Drig	5	dsl	450	Cbot 658	318	40
Sabre Drig Div TRG Drig	9	dsl	450	MC U34	450	60
NOWATA						
Winter Drig & Expl	1	dsl	900	Jaswell J2400	900	24
	2	dsl	900	Jaswell J2400	900	24
OCHILTREE						
Unit Drig & Expl	7	dsl	500	MC U15	800	110
OKFUSKEE						
Magic Circle Drig	14	dsl	320	Cbot 2042	700	95
Scott Drig, Jerry	10			450		
OKLAHOMA						
Basin Drig	15	dsl	1000	MC U712A	1200	170
	16	dsl	1350	MC U914C	1400	220
	17	dsl	1350	MC U914C	1400	220
Beard Drig (OK)	5	dsl	1379	C-E D2	1029	150
Big Chief Drig	20	gas	1200	MC U40	960	135
	30	gas	1515	Idco 1050	1515	150
Bigard Drig, James	11	d-e	1000	Idco ED1200	2000	200
	18	d-e	1000	Idco ED1200	2000	200
Bonray Drig	8	dsl	850	Coop 750	650	100
C E C Drig	5	dsl	2400	G-D 800	1600	180
	6	dsl	2400	G-D 800	1600	180
Culver Drig	2	dsl	700	Nat 50A	700	120
	5	dsl	800	G-D 800	800	160
Drillers	21	dsl	300	C-E GB350	450	60
	40	d-e	2100	G-D 1100E	2100	240
Eason Oil	19	dsl	1800	C-E D2	750	130
	20	d-e	2000	C-E D3	1000	160
Grace/T R G Drig	3	d-m	750	G-D 700M	1100	130
Johnson Bates Drig	1	gas	350	MC U34	300	57
	2	gas	325	MC U34	245	65
	5	dsl	1000	MC U15	1100	100
Nicor Drig	3	dsl	1000	MC U15	700	115
	65	d-e	2700	MC U914EC	1400	210
	71	d-e	2000	MC U914EC	1400	210
Parker Drig	114	d-e	2700	Idco 3000E	3000	300
	142	dsl	2600	Nat 1320E	3000	250
	164	dsl	1650	OIME SL1500P	1650	200
	166	d-e	3000	OIME 3000E	3000	300
	181	dsl	3000	OIME Hercules 3000E	3000	300
	204	dsl	2200	OIME E1500C	2200	220
	208	gas	2200	Idco 711	2200	180
	217	gas	3200	OIME E2000	2000	250
	43	gas	1800	Olwl 96	1800	200
	47	gas	1400	OIME 1500P	1400	200
	71	gas	1600	Nat 125	1800	200
OKLAHOMA (Cont'd)						
Ratliff Drig	10	gas	1020	Nat 50	1020	100
	11	dsl	850	S/B N7	850	100
	12	dsl	700	G-D 500M	700	120
	16	dsl	750	MC U15	750	100
	17	dsl	700	Nat 50A	700	120
Sabre Drig Div TRG Drig	7	dsl	600	MC U15	450	75
Sandia Drig	6	dsl	4000	C-E C3	4000	350
Santa Fe Drig	20W					
	7W					
TWT Expl	54	dsl				100
	61					
Warren Interstate Drig	1	dsl	1000	Cbot 2042TDHT	700	107
OSAGE						
Equity Drig	150	dsl	300	Fail 2500	300	30/ 3.5"
	175	dsl	300	Wils Super 38	300	42
Hughes Drig	16	dsl	650	Speedstar SS40	375	40
	17	dsl	650	Speedstar SS40	375	40
McLennan Drig	4	dsl	318	G-D	238	20
PAWNEE						
McLennan Drig	3	dsl	450	Cbot 658	318	45
	5	dsl	450	Cbot 658	318	45
PAYNE						
Arden Drig	21	dsl	300	Coop M21	300	50
Bodard & Hale Drig	4	dsl	450	MC U34	400	65
Hughes Drig	15	dsl	550	Cbot 550	475	80
	6	dsl	550	Idco H35	400	62
Porter Drig, Gene	1	dsl	600	MC U34	435	60
Sabre Drig Div TRG Drig	153	dsl	450	MC U34	450	60
Venture Drig	1	dsl	550	Cbot 750	750	75
PITTSBURG						
Alexander Drig	2	dsl	800	C-E G42	800	125
	3	dsl	1000	C-E J1100	1200	150
Basin Drig	13	dsl	1470	G-D 700	1220	140
Cactus Drig Co	51	dsl	800	S/B N55	1000	90
Culver Drig	22	dsl	800	Coop 750	800	95/ 4"
Dual Drig	1	dsl	1500	Wils 75P	900	125
	10	dsl	1500	Wils 120	1100	150
FWA Drig	10	dsl	1150	Wils Giant	720	115
Grace Miller Drig	111	dsl	350	S-H 5000	300	60
Lagersen Drig	4	d-e	2000	C-E J1100E	2500	220
Seneca Drig	1	d-e	800	MC U36EA	800	140
	2	d-e	800	MC U36EA	800	140
Unit Drig & Expl	5	dsl	600	MC U15	800	120
PONTOTOC						
Bauich Drig	1	dsl	350	S/B N4	275	48
Rockwell Drig	18	dsl	670	MC U34	450	50
Royal Drig	1	dsl	300	C-E GB160	300	42
T E K Drig	F1500	gas	350	Fail 1500	350	15
	WS	dsl	265	Wils Super	265	45
POTTAWATOMIE						
Bodard & Hale Drig	10	dsl	450	Olwl 52T	600	90
	11	dsl	450	MAC 300	450	65
	14	dsl	450	S/B N4	450	65
	15	dsl	450	MAC 400	525	75
	16	dsl	450	Idco H37	450	65
	9	dsl	550	Beth S55	700	90
Challenger Drig	26	dsl	30	Nat T20	600	50
Rockwell Drig	24	dsl	450	MAC 300	450	50
Scott Drig, Jerry	2	dsl	420	MC U34	430	65
	5	dsl	375	Beth S45	375	60
ROGER MILLS						
Arden Drig	10	d-e	2000	C-E D3	1200	160
	12	d-e	2600	Nat 110UE	1500	220
	5	d-e	2400	C-E D3	2000	180
Astro Drig	17	dsl	1050	Cbot 750	700	110
Brinkerhoff-Signal	56	d-e		C-E A110E	2700	180
Challenger Drig	32	dsl	2400	Nat 1320	2400	200
	37	dsl	2400	Idco 2500	2400	280
Cliffs Drig	38	d-e	2800	Olwl 840E	3300	180
Continental Drig	1	d-e	3200	Idco E2100	2000	250
	12	d-e	2000	Idco ED1200	1200	160
	5	d-e	2600	Idco E1700	1700	190
Culver Drig	7	d-e	2000	G-D 1500	2000	250/ 5"
	8	dsl	1200	OIME SL7A	1200	180/ 5"
	9	dsl	1800	Nat 110	1800	180/ 5"
Eason Oil	12	dsl	2000	Nat 80B	1200	160
	25	d-e	2600	C-E C1E	1500	210
Exeter Drig	54	gas	350	Nat 50	600	120
Forex Neptune and/or Affl	52	d-e	3200	G-D 1500E	2000	217

OKLAHOMA (Cont'd)

• Contractor	Rig No. •	Type Power •	Total HP All Main Mud Pumps •	Drawworks Make And Model •	Total HP Available to Drawworks •	Rated Depth With 4½-in. Pipe, 100 ft. •
ROGER MILLS (Cont'd)						
FWA Drlg	7	dsl	1500	Wils Titan	1040	140
Grace/T R G Drlg	12	d-e	1500	G-D 800E	1800	150
	15	dsl	1000	G-D PZ8	1305	140
	16	d-e	1500	G-D 1100E	1800	150
	23	dsl	1400	Nat 80B	1305	145
Harper-Turner Drlg	10	dsl	2000	Nat 80B	1500	160
Helmerich & Payne Intl Drlg	44	dsl	1650	Nat 110	1815	220
	54	dsl	1100	Oilwl 76	1210	160
	92	d-e	2000	Nat 110ME	1500	200
	93	dsl	1600	Nat 80B	800	150
	97	d-s	3400	Oilwl E2000	2000	260
Lanex Drlg	A-12	d-e	1600	C-E D2	750	130
Loffland Bros	123	gas	1975	Nat 130	2200	260
	311	dsl	2250	G-D 1500	2500	240
Mercury Drlg	14	dsl	1000	MC U914	2100	220
Moran Bros	67	dsl	1700	C-E D3 Type III	1000	150
Moran Drlg, E W	2	dsl	1500	G-D 700	800	150
Nicor Drlg	31	d-e	2000	MC U914EC	1400	210
Noble Drlg	OW-841	el	2775	Oilwl 840E	1400	200
Nowotny & Conley Drlg	6	d-e	3200	Nat 1320UE	3000	250
Parker Drlg	218	gas	1400	OIME 1000C	1400	180
	59	gas	1650	OIME 1500E	1650	200
Penrod Drlg	131	dsl	1000	Nat 80B	1760	
Ratliff Drlg	31	dsl	1650	Texas Flange	1650	180
Rowan Drlg US	14	dsl	3200	Nat 1625M	3000	350
	31	dsl	3200	Nat 1625	3300	300
Sandia Drlg	3	dsl	3000	C-E D3	3000	180
Santa Fe Drlg	15-W	dsl	3200	C-E C3	3000	300
Sharp Drlg	369	d-e	1488	MC U712EC	1995	180
Slawson Drlg	9	dsl	1400	Idco H900	950	140
Triad Drlg	7	dsl		G-D 800	1100	160
	8	dsl	2250	G-D 1500	2250	240
Viersen & Cochran Drlg	1	dsl	800	Oilwl 660	800	120
	21	dsl	1500	Nat 80B	1500	185
	3	dsl	800	Nat 75CA	800	140
	5	dsl	800	Oilwl 660	800	120
SEBASTIAN						
Grace Miller Drlg	108	gas	450	MC U15	450	80
SEMINOLE						
Johnson Bates Drlg	15	dsl	1350	Wils Titan	1575	140
	7	dsl	1000	Wils Titan	1350	120
	8	dsl	1000	Wils Giant	1050	120
Scott Drlg, Jerry	1	dsl	350	S/B N4	350	55
Sloan Drlg	10	dsl	370	MC U34	475	65
	12	dsl	370	S/B N4	475	65
	14	dsl	370	Nat T20	500	65
	16	dsl	400	Wils 42	600	70
	18	dsl	450	Wils 42	450	70
	20	d-e	1000	Wils 90EH	1000	140
	26	dsl		Dugan Machine DS5	265	85
STEPHENS						
C E C Drlg	4	dsl	1400	G-D 500	800	120
Challenger Drlg	23	dsl	1800	G-D 11100	2700	180
Compadre Drlg & Expl	1	dsl	360	W-N A25040	360	60
Exeter Drlg	47	dsl	910	C-E 450	900	120
	51	gas	800	MC	700	11
Guffey-Schlensker Drlg	2	dsl	600	S/B N45	700	80
Helmerich & Payne Intl Drlg	8	dsl	1100	Nat 55	1210	140
Jones Drlg Corp	10	dsl	2000		2000	200
	11	dsl	600		600	100
	16	dsl	850		1400	180
	18	dsl	600		600	80
	2	dsl	385		385	50
	5	gas	400	Beth S45	400	70
	6	dsl	500		400	70
Loffland Bros	104	d-e	3300	C-E 3000	3300	350
Thomas Drlg	10	dsl	600	Wils Super Giant	800	110
Top Drlg	5	dsl	1000	MC U15	1000	100
Trigg Drlg	5	g-b	500	Nat 50A	800	100
Vi-Rol Drlg	1	dsl	435	Wils Mogul 42	435	65
	2	dsl	120	HT 100	210	30
TEXAS						
Damac Drlg	8	dsl	550	Cbot BIR550	450	65
Service Drlg (TX)	10	dsl	300	MC	400	50
	2	dsl	450	MC U34	450	60
	5	dsl	1000	MC U15	800	100
	8	dsl	800	MC U15	630	70
TILLMAN						
Burns L D Drlg	4	dsl	888	Wils 75	780	120/4"
WASHITA						
Bonray Drlg	1	dsl	1230	Oilwl 760	1230	160
	2	dsl	1650	Oilwl 860	1650	200
	20	dsl	1680	Idco Super 711	1680	170

OKLAHOMA (Cont'd)

• Contractor	Rig No. •	Type Power •	Total HP All Main Mud Pumps •	Drawworks Make And Model •	Total HP Available to Drawworks •	Rated Depth With 4½-in. Pipe, 100 ft. •
WASHITA (Cont'd)						
Bonray Drlg	30	dsl	2400	Nat 1320	2400	250
	31	dsl	2400	Nat 1320	2400	250
	32	dsl	1600	Nat 110	1600	200
Cactus Drlg Co	29	dsl	1630	Nat 110	2700	200
	6	dsl	1040	Idco 711	1200	140
Challenger Drlg Drillers	6-E	dsl	900	Nat 80E	1000	140
	10	dsl	1000	Nat 100M	1800	180
	44	d-e	2000	G-D 2000	2000	225
Durkee Drlg	10	d-s	4000	Idco E2100S	2000	250
Eason Oil	24	d-e	2600	C-E C1E	1500	210
Grace/T R G Drlg	132	d-e	3000	G-D 3000E	3000	300
	19	d-e	2200	G-D 1500E	2400	220
Haning & Young Drlg	151	d-e	2000	S/B NE95	1700	180
Helmerich & Payne Intl Drlg	48	dsl	1640	Nat 110	1820	220
	78	d-s	2000	Nat 110UE	1500	200
	89	d-s	2730	Nat 110UE	2730	200
	96	d-s	1600	Nat 80UE	800	150
	98	d-s	2000	Nat 110ME	1500	200
	99	d-s	3400	Oilwl E2000	2000	260
Lagersen Drlg	8	d-e	2000	C-E CIE	2500	220
Loffland Bros	218	d-e	3300	MC U1220E	2200	280
	227	dsl	2400	MC U914A	2500	220
	324	dsl	2250	G-D 1500	2500	240
	327	dsl	2250	G-D 1500	2500	240
Magic Circle Drlg	18	d-e	4000	C-E C2	2000	250
Moran Drlg, E W	9	dsl	2600	Wils 150	1500	180
Murco Drlg	50	d-e	2200	Oilwl 860E	2000	180
	54	d-e		G-D 1100E		180
Nicor Drlg	55	d-e	2000	MC U914EC	1400	210
Noble Drlg	GD2	dsl	3135	G-D 2100	3135	250
	214	gas	2200	OIME 1500C	2200	220
Quarles Drlg	12	dsl	2700	MC U914C	2400	220
Ratliff Drlg	30	dsl	1650	Texas Flange	1650	180
Resource Drlg	RD-24	dsl	2330	Nat 110	2740	180
Robinson Bros Drlg	18	dsl	2000	G-D 1500E	2000	200
	22	dsl	2000	C-E E900	2000	150
	27	dsl	1050	Idco H725	1500	160
	6	dsl	2200	Nat	1600	180
Rowan Drlg US	30	dsl	2600	C-E A1500	2400	220
	5	dsl	3200	Nat 1625M	3000	350
Santa Fe Drlg	21-W	d-e	2600	Nat 110UE	1500	160
	22-W	d-e	2800	Nat 10UE	1500	160
	95-W	d-e	2800	Oilwl E2000	2000	250
Trigg Drlg	9	d-e	2700	Beth 1350MX		220
Unit Drlg & Expl	21	dsl	1000	G-D 700	1300	160
	28	d-e	1600	G-D 1500E	2000	250
	30	dsl	2350	Beth 1350M	1800	200
Warrior Drlg	4	dsl	1800	BDW	1000	170
Willbros Drlg	10	d-e	3000	Idco E1700	3000	250
WOODS						
Johnson Bates Drlg	9	dsl	700	Beth S50	450	75
Magic Circle Drlg	11	dsl	900	Nat 50A	900	100
WOODWARD						
Big Chief Drlg	24	gas	1200	MC U15	900	110
Mercury Drlg	2	dsl	750	MC U15	940	120
Rine Drlg	3	dsl	750	S/B N55	750	95
	6	gas	700	S/B N75	750	120
	9	dsl	1000	G-D 800	1000	135
Search Drlg	1	dsl	640	Nat T32	640	60
	2	dsl	950	Idco H725C	950	100
	3	dsl	956	Idco H725C	950	100
	4	d-e	2700	G-D 1500E	3000	240
	6	d-e	2000		1000	140
Triad Drlg	2	dsl		S/B N45	550	90
Unit Drlg & Expl	14	dsl	1000	G-D 700	1300	160
	9	dsl	600	S/B N55	1050	120

OREGON

• Contractor	Rig No. •	Type Power •	Total HP All Main Mud Pumps •	Drawworks Make And Model •	Total HP Available to Drawworks •	Rated Depth With 4½-in. Pipe, 100 ft. •
CLATSOP						
Brinkerhoff-Signal	70	dsl	550	Crdw KW250	450	65
COLUMBIA						
Taylor Drlg	4	dsl	750	Nat 50	750	90

PENNSYLVANIA

• Contractor	Rig No. •	Type Power •	Total HP All Main Mud Pumps •	Drawworks Make And Model •	Total HP Available to Drawworks •	Rated Depth With 4½-in. Pipe, 100 ft. •
UNDESIGNATED						
International Petr Serv	2	dsl	275	CP-7000	375	40
	3	dsl	350	CPT750DH	285	45
	4	dsl	475	Wils 42	475	75
CAMBRIA						
Ray Resources	8	dsl	450	S/B N56	800	100
CLEARFIELD						
Fairman Drlg	14	dsl	400	S/B	350	75
	15	dsl	300	Idco	300	50
	5	dsl	400	Crdw	350	40

PENNSYLVANIA (Cont'd)

• Contractor	Rig No. •	Type Power •	Total HP All Main Mud Pumps •	Drawworks Make And Model •	Total HP Available to Drawworks •	Rated Depth With 4½-in. Pipe, 100 ft. •
CLEARFIELD (Cont'd)						
Fairman Drlg	6	dsl	350	Idco H44	550	80
	7	dsl	350	Idco H44	550	80
	8	dsl	350	Idco H44	550	80
	9	dsl	400	Idco H44	500	80
ERIE						
Union Drlg	10	dsl	1200	Idco BIR5535	425	75
	12	dsl	1200	Cbot 500	425	65
	14	dsl	1200	Crdw KB250	425	65
	7	dsl	1200	Cbot 500	425	65
INDIANA						
Delta Drlg	67	dsl		S-H 7000	480	90
	71	dsl	1000	S-H 7000	440	90
	77	dsl	250	Idco H35KD	291	60
	79	dsl	255	Idco H35KD	291	60
	91	dsl	255	Idco H35KD	291	60
Fairman Drlg	11	dsl	400	Idco H44	500	80
International Petr Serv	8	dsl	600	Wils Mogul 42	475	75
JEFFERSON						
Fairman Drlg	12	dsl	400	Idco	250	50
McKEAN						
Delta Drlg	72	dsl	250	S-H 7000	440	90
MERCER						
Devonian Drlg	2	dsl	880	Cbot 2042	475	60
P E P Drlg	5	dsl	550	G-D 500M	500	70
POTTER						
Delta Drlg	92	dsl	255	Idco H35KD	291	60
VENANGO						
International Petr Serv	10	dsl	600	Wils Mogul 42	475	75
WARREN						
Devonian Drlg	1	dsl	505	Kremco K800	475	70
WESTMORELAND						
Fairman Drlg	10	dsl	400	Wils Mogul 42	350	50

SOUTH DAKOTA

• Contractor	Rig No. •	Type Power •	Total HP All Main Mud Pumps •	Drawworks Make And Model •	Total HP Available to Drawworks •	Rated Depth With 4½-in. Pipe, 100 ft. •
HARDING						
Cardinal Drlg	15	dsl	1060	C-E GA500	760	100
Elenburg Expl	3	dsl	320	W-N CC2000	230	25

TENNESSEE

• Contractor	Rig No. •	Type Power •	Total HP All Main Mud Pumps •	Drawworks Make And Model •	Total HP Available to Drawworks •	Rated Depth With 4½-in. Pipe, 100 ft. •
CUMBERLAND						
Delta Drlg	83	dsl	2600	C-E C1 Type III	2331	180
OVERTON						
Miller Contract Drlg	10	dsl	525	I-R	525	30
	16	dsl	525	I-R	525	30
	18	dsl		I-R T4	600	35
	2	dsl	400	I-R	400	30
	20	dsl		I-R T4	400	25
	9	dsl	525	I-R	525	30
SCOTT						
Norman Drlg, James R	1	dsl	750	I-R	450	25
	2	dsl	750	I-R	450	25

TEXAS

• Contractor	Rig No. •	Type Power •	Total HP All Main Mud Pumps •	Drawworks Make And Model •	Total HP Available to Drawworks •	Rated Depth With 4½-in. Pipe, 100 ft. •
UNDESIGNATED						
Ard Drlg	4	dsl	900	MC U15	990	120
	8	dsl	1900	C-E 800GB	1800	160
Bearden Drlg, Jack E	4	dsl	600	Wils Mogul 42	400	65
	6	dsl	1200	Wils 75	900	95
	7	dsl	600	Wils Mogul 42	400	65
Cactus Drlg Co	99	dsl	820	Nat 370	670	90
Cothrum Drlg	1	dsl	774	C-E 350	636	95
	11	dsl	250	G-D 210B	250	100
	14					
	16					
	17					
	2	dsl	926	MC U15A	912	115
	5	dsl	1525	BDW 650	912	140
	6	dsl	750	C-E G500	600	75
	9	dsl	900	S/B N4	500	65
D B Drlg	10	dsl	675	S/B N4	480	75
	12	dsl	2000	Nat 100	1500	180
	4	dsl	675	MC U34	540	70
	5	dsl	675	S/B N4	540	75

TEXAS (Cont'd)

Contractor	Rig No.	Type Power	Total HP All Main Mud Pumps	Drawworks Make And Model	Total HP Available to Drawworks	Rated Depth With 4½-in. Pipe, 100 ft.
UNDESIGNATED (Cont'd)						
Faith Drlg	2	del	1500	Nat 55	1300	120
Henley Drlg	5	d-e	2800	C-E C1	1650	180
	6	del	2580	C-E D3	1720	140
	7	d-e	2800	C-E C2	2000	250
	9	d-e	2800	C-E C2	2800	250
Herb Expl	1	g-b		Fall 1500	100	15/2.38"
J & W Drlg	2	gas	180	Idco 150	180	35
	3	del	280	Wils Mogul 42	440	60
McMurrey Petr	1	del	800	S-H	750	100
	3	del	800	S-H	750	100
Mellon Drlg	1	del	750	C-E GB250	570	78
	2	del	1300	C-E GB350	750	100
Morrison Drlg & Prod	103	del	476	Idco H35	550	85
O'Neal Drlg	14	del	15000	Nat 80B	1500	150
	15	d-e	2000	G-D 800	1500	180
R Rigs Inc	1	del	350	G-D 3000	350	60
	2	del	350	G-D 3000	350	60
	3	del	375	MAC 400	400	85
	4	del	375	Shaf 6000S	500	85
Safari Drlg	5	del	370	C-E GA250T	280	50
Santa Fe Drlg	SFW-10	d-e	2000	C-E Electrohoist H11	1800	240
	SFW-12	d-e	2300	C-E A1100E	1800	200
	SFW-14	d-e	3200	C-E C3111	3000	300
	SFW-16	d-e	1300	C-E C11	2000	250
	SFW-3	d-e	2900	C-E A1500E	2000	300
	SFW-4	d-e	2800	C-E C3111	3000	300
	SFW-6	d-e	2300	C-E C3111	3000	300
	SFW-7	d-e	2800	C-E C3111	3000	300
	SFW-8	d-e	2800	C-E A1500E	2000	200
Sitton Drlg	2	del	650	Wils 75P	900	115
Southland Drlg	10	del	1800	Beth 810	1800	170
	8	del	700	C-E GB350	700	80
TMBR Drlg	20	del	350	Idco H400	500	90
Wes-Tex Drlg	18	del	600	Nat 50CA	900	100
	20	del	600	Nat 50CA	900	100
Willis Drlg	7	del	2500	S/B N95	2500	180
	8	del	1600	BDW 800	1100	120
ANDERSON						
Gibson Drlg	9	del	1030	Wils Mogul 75P	700	90
Grace France Drlg	7	del	1300	G-D 500	800	110
Hinton Drlg, W B	6	del	1600	Nat 80B	1650	150
Justiss Oil	25	del	250	C-E GC350	450	120
Rainbow Drlg	3	del	1600	Cbot 900	900	110
Verna Corp	25	del	1000	MC U15	600	100
ANDREWS						
BJM Drlg & Expl	2	del	800	MC U34	800	80
Cactus Drlg Co	22					
Cactus Drlg Corp	22	del	1650	Nat 100	1650	150
Cherokee Drlg & Dev	2	del	1150	Wils 75	900	11
Delta Drlg	98	del	1500	Wils Giant Roadair	784	125
Johnn Drlg	10	del	800	Olwl 66	800	100
Landis Drlg	[illegible]	del	1000	S/B N75	1350	140
Moran Bros	71	d-m	500	Nat 370	550	85
Rio Colorado Drlg	143	del	1200	Nat T45	1100	120
Rod Ric	2	del	450	Beth S45E	400	70
Sharp Drlg	32	del	1185	C-E 800	1482	165
Sterling Drlg (TX)	2	del	1500	Nat 610	1150	130
TMBR Drlg	1	del	350	MC U15CA	500	60
	17	del	350	MC U15CA	500	90
	25	del	700	G-D 500	700	110
ANGELINA						
Butler-Johnson	12	del	1300	G-D M700	1300	125
Lagersen Drlg	5	d-e	1600	C-E J750E	1250	180
Woolf & Magee	3	del	1450	G-D 700	1275	135
ARCHER						
Burns L D Drlg	8	del	444	MC U34B	350	75
C M D Drlg	1	del	400	Wils Mogul 42	400	70
Lin-Mour Drlg	5	del	750	C-E G-42	750	70
Megargel Drlg	10	del	750	MC U15	750	70
ATASCOSA						
M G F Drlg-Houston	30	del	750	Nat 610	800	120
South Texas Drlg	8	del	600	S/B N46	550	80
	9	d-e	1350	G-D 1500E	2000	250
BAYLOR						
Lin-Mour Drlg	2	gas	380	C-E G350	380	65
BEE						
Culver Drlg	11	del	1500	MC U814C	1500	170
BORDEN						
Bonray Drlg	3	del	900	S/B N7	900	105
D B Drlg	7	del	1380	Nat 50A	980	115
GCO Drlg	5	del	820	MC U15	850	90
Johnn Drlg	5	del	700	MC U15	700	85
BORDEN (Cont'd)						
McCutchen Drlg, J W	4	del	820	Wils 90	820	120
Quarles Drlg	5	del	850	Nat 50A	500	120
Robinson Drlg of Texas	2	del	750	MC U15	900	100
Transcontinental Drlg-San Angelo	95	del	750	G-D 500	750	120
	96	del	1000	MC U36A	850	120
Wes-Tex Drlg	9	del	700	Nat 50A	700	100
Willbros Drlg	4	del	1700	Nat 55	1280	140
BOWIE						
Grace France Drlg	4	del	1300	G-D 500	800	110
BRAZORIA						
Big 6 Drlg	2	del	800	Cbot	600	100
Challenger Drlg	48	del	1000	Unit U36	1000	130
Delta Drlg	101	d-s	2800	C-E C1 Type II	2730	200
Eagle Prod & Drlg Serv	10	d-e	1600	Nat 80UE	1600	180
Loffland Bros	107	del	2160	S/B N12	2400	170
M G F Drlg-Houston	39	del	2200	Nat 125	1500	200
M N D Drlg-Southern	10	d-e	1820	S/B N95	1820	200
BRAZOS						
Alco Drlg Southern	4	del	1550	Nat 55	550	120
	61	d-e	2800	C-E IIC	2000	200
Circle C Drlg	1	del	1400	Nat 100	1450	150
Cothrum Drlg	20					
Culver Drlg	4	del	800	S/B N45	700	100/4"
Delta Drlg	80	del	1300	S-H 7000	480	90
H S Energy/Senior Drlg	40	del	1500	Cbot 1200 2550	1300	135
Merit Drlg	8	d-s	1200	Olwl 660E	700	110
	9	d-s	1200	Olwl 660E	700	110
Rainbow Drlg	6	del	1600	Cbot 900	900	110
Resource Drlg	4	del	1560	Nat 80B	1835	140
Spartan Drlg	16	d-e	600	Sup 700UE	750	100
	7	d-e	600	Sup 700UE	750	100
BREWSTER						
Dual Drlg	26	del	1800	Wils 150A	1650	160
BRISCOE						
Robinson Bros Drlg	26	del	1050	Idco H725	1500	160
BROOKS						
Cliffs Drlg	29	del	2800	Nat 110	2475	200
Magee-Poole Drlg	4	del	1500	Cbot 900	950	110/4"
Rio Colorado Drlg	140	del	1200	Nat T45	900	100
BURLESON						
Basin Drlg	11	del	1470	G-D 700	1220	140
	12	del	1470	G-D 700	1220	140
Challenger Drlg	35	del	800	S/B N75	1200	120
Haning & Young	101	d-m	1600	Nat 610	750	125
	102	d-m	2000	OIME SL7	1000	125
Magee-Poole Drlg	12	del	1500	Cbot 900	950	110/4"
Nixon Drlg	7	del	400	Midway	600	65
PRC Drlg	3	del	1250	S/B N46	730	100
Rosamond Drlg	6	del	1650	C-E A550	1275	140
Spur Drlg	1	del	1400	Sup 1000	1000	120
Sterling Drlg (TX)	5	del	1230	Nat 50CA	820	110
CALDWELL						
Nixon Drlg	1	del	300	Crow CatD	300	40
	4	del	300	Stuart	300	40
	5	del	300	Wils	300	40
	6	del	300	Stuart	300	40
CALHOUN						
Eljay Drlg	2	d-s	2800	Olwl E2000	2000	250
M G F Drlg-Houston	31	del	700	Olwl 76	900	120
Penrod Drlg	126	del	1000	Nat 80B	1760	150
	132	del	1000	Nat 80B	1760	
Resource Drlg	18	del	1040	Nat 610	1220	120
CALLAHAN						
Moss Drlg	5	del	725	TSM 6000	450	75
CARSON						
Hudson Drlg, Leonard	8	del	300	Wils Mogul	300	60
Service Drlg (TX)	6	del	300	MC U34	300	45
CASS						
H & S Drlg	1	del	1700	S/B N95	2145	140
Transcontinental Drlg-Magnolia	2	gas	500	C-E GB350	500	85
CHAMBERS						
Diamond M Land Drlg	170	del	1750	Wils Mod 90	1805	125
	171	del	1300	MC Unit 712	1200	145
	172	gas	1750	Nat 110M	2550	180
Goldrus Drlg	20	del	1850	Cbot 1200	1054	150
Kelley & Kerr Drlg	Paso Grande	del	1400	OIME SD5	800	120
M G F Drlg-Houston	37	del	500	G-D 500	700	90
M G F Drlg-Lafayette	43	del	1800	Olwl 96	1200	180
M N D Drlg-Southern	6	del	1540	G-D 500	770	105
Nicor Drlg	75	d-m	1500	Cbot 2550TRD	1200	150
Richards Drlg	3	del	1800	S/B N75	1200	125
Richards-Armstrong	6	del	2500	Olwl 880	2400	180
	7	del	1900	Cbot 1000	900	125
Sloan Drlg	22	del	1000		1000	75
South Texas Drlg	4	del	1000	S/B 1046	750	100
CHEROKEE						
Blocker Drlg-Alice	6	del	1500	Cbot HT Expl	950	100
Forex Neptune and/or Affil	47	d-e	3200	G-D 1100E	1500	180
Gibson Drlg	10	del	1200	C-E D2	1200	120
Grace France Drlg	2	del	1700	Olwl 760	1700	170
	3	el	2400	Olwl E760	2400	170
Guffey-Schlenker Drlg	3	del	1270	Nat 75CA	1270	140
Maxwell Herring Drlg	15	del	1200	S-H	400	100
Wheless Drlg	10	del	1800	C-E C13	1800	180
CLAY						
Burns L D Drlg	5	del	744	Beth S55	780	100
	6	del	1360	MC U36A	780	140
Lin-Mour Drlg	21	g-b	650	MC U15	650	75
COCHRAN						
Norton Drlg	5	del	550	Wils 75	850	105
Sitton Drlg	6	del	650	Wils 75P	900	100
COKE						
GCO Drlg	1	del	640	Nat T20	450	75
Wes-Tex Drlg	10	del	300	S/B N4	500	80
	16	del	335	S/B N4	500	80
COLEMAN						
Morrison Drlg & Prod	101	del	450	Nat T20	476	60
Safari Drlg	3	del	340	S/B N4	300	70
	6	del	300	C-E U34	370	60
COLLIN						
Moran Drlg, E W	6	del	950	Beth S55	750	110
COLORADO						
Big 6 Drlg	3	del	750	Cbot	600	110
Frio Drlg	2	del	800	Nat J45	600	100
FWA Drlg	18	del	1150	Wils Giant	380	75
Loffland Bros	77	del	1450	Nat 100	1575	150
Magee-Poole Drlg	14	del	1475	Cbot Explorer III	700	90/4"
COMAL						
Loffland Bros	331	del	2180	MC U1220	2400	200
COOKE						
Felderhoff Bros Drlg	1	del	285	Wils Mogul	185	55
	2	del	950	Wils Giant	650	95
	3	del	600	MAC 400	350	75
Jones Drlg Corp	12	del	1200		1200	100
Little-Daulag	T-2	del	1300	Idco H525D	670	80
COTTLE						
Lin-Mour Drlg	35	gas	700	Wils Giant	700	100
Moran Drlg, E W	18	del	860	S-H 7000	450	95
CRANE						
Britton Inds Drlg	4	del	1000	Nat 50CA	1000	130
Cactus Drlg Co	20					
Cactus Drlg Corp	20	del	800	S/B N45	800	70
Hillin Drlg	6	del	500	Idco H25 Trailer Rig	380	50
Johnn Drlg	4	del	700	MC U15	700	85
	8	gas	800	S/B N75	800	125
Kenai Drlg of Texas	32	del	1200	C-E GA500	800	110
Norwood, A N	1	del	450	Wils Super 38	350	55
Resource Drlg	RD-26	del	1560	Nat 80B	1835	140
Rod Ric	4	del	750	Idco H40	600	85
CROCKETT						
D B Drlg	14	del	1290	Nat 50A	850	110
Delta Drlg	2	del	1400	G-D 700M	784	125
	61	del	1800	Idco Super 711	1640	150

TEXAS (Cont'd)

• Contractor	Rig No. •	Type Power •	Total HP All Main Mud Pumps •	Drawworks Make And Model •	Total HP Available to Drawworks •	Rated Depth With 4½-in. Pipe, 100 ft. •
CROCKETT (Cont'd)						
Santa Fe Drlg	12	d-e	2000	C-E A1100E	1600	180
Tucker Drlg	11	dsl	525	BDW 800	1200	140
	8	dsl	550	Idco H40	550	90
Wes-Tex Drlg	15	dsl	335	S/B N4	500	80
	6	dsl	650	Beth S80	700	100
CROSBY						
Cactus Drlg Co	19					
Cactus Drlg Corp	19	dsl	800	Nat 50A	800	100
Wes-Tex Drlg	5	dsl	550	Nat 50A	700	100
DALLAS						
Eagle Prod & Drlg Serv	1	d-e	2000	Olwl 840E	2000	200
	3	d-e	2000	Olwl E2000	2000	250
	4	d-e	2000	Olwl E760	1000	160
	5	d-e	2000	Olwl E2000	2000	250
	6	d-e	2000	Olwl E2000	2000	250
	7	d-e	2000	Olwl E2000	2000	250
	9	d-e	1600	Olwl E700	1400	120
DAWSON						
Cactus Drlg Co	52	dsl	520	Idco H35	454	65
	71	dsl	520	C-E U36A	950	100
Drillers	24	dsl	900	S/B N55	900	110
FWA Drlg	1	dsl	1300	Wils Giant	900	110
GCO Drlg	3	dsl	820	BDW 650M	650	100
	7	dsl	1750	Nat 75CA	1500	130
Landis Drlg	4	dsl	800	S/B N45	700	100
M G F Drlg-Midland	11	dsl	900	Beth M58	900	125
Robinson Drlg of Texas	6	dsl	950	Beth M58	1350	125
Tri-Service Drlg	8	g-b	750	Olwl 76	750	130
DE WITT						
B D K Drlg	4	dsl	1095	S/B N7	870	115
Buzzini Drlg	11	d-e	3400	Olwl E3000	3000	300
	8	dsl	3600	Olwl M2000	2400	200
Howell Drlg	2	dsl	1550	Cbot 1200	1130	150
Rio Grande Drlg	9	dsl	1300	Nat 110M	2400	200
DEWEY						
Quarles Drlg	4	gas	1400	C-E GB 500	500	120
DICKENS						
Texzona Drlg	1	dsl	475	MC U34B	450	65
DIMMIT						
Cactus Drlg Co	55	dsl	520	Idco H35	670	65
Dixon Drlg	10	dsl	900	S/B N46	950	180
	12	dsl	900	S/B N4	450	70
DUVAL						
Cinco Drlg	6	dsl	1015	MC U15	780	110
Delta Drlg	86	d-e	2600	C-E C1 Type II	3456	180
Diamond M Land Drlg	173	d-e	2700	MC 914EU	3000	180
Dixilyn-Field Drlg	14	dsl	2200	Olwl 840E	2000	200
	23	dsl	2800	Olwl 860	2331	180
	24	dsl	2500	Olwl 860	2331	180
Harkins & Co	1	dsl	1800	C-E C Type III	1800	180/5"
	2	dsl	1500	S/B N95	1500	140
	4	dsl	1280	S/B N75A	1280	125
	9	dsl	2100	C-E A1100	2100	160/5"
Magee-Poole Drlg	5	dsl	1500	Cbot 900	950	110/4"
Pearl Expl	1	dsl	600	Wils 65	500	70
	2	dsl	600	Wils 65	600	85
PRC Drlg	1	dsl	800	S/B H4610A38	500	80
Richards Drlg	9	d-e	3400	Olwl E3000	3000	300
EASTLAND						
Bandera Drlg	1	dsl	750	MAC 300	475	75
Brunner Drlg	2	dsl		S/B N4	375	60
	4	dsl		Idco H38D	350	50
	7	dsl		Wich	350	50
Wes-Mor Drlg	11	dsl		Wils Roadair		60
ECTOR						
Cactus Drlg Co	59	dsl	520	S/B N4	454	65
	63	dsl	520	S/B N4	454	60
	65	dsl	520	S/B N4	454	60
D & R Drlg	1	st	1800	Nat 3410FE	1700	140
	2	st	2000	C-E EFP	1700	200
Delta Drlg	70	dsl	300	S-H 6000	380	70
Drilltech Inc	1	dsl	1000	G-D 500M	850	100
	2	dsl	1000	G-D 500M	850	100
Kenai Drlg of New Mexico	10	dsl	365	C-E GA250T	425	65
Kenai Drlg of Texas	11	dsl	400	Nat T20	400	65
	15	dsl	600	C-E GB500	800	110
	16	dsl	700	C-E GA500	780	110
	17	dsl	800	S/B N4	580	70
	19	dsl	825	C-E GA500	800	110
	20	dsl	500	C-E GB250T	400	65
	25	dsl	700	C-E GB500	800	110

TEXAS (Cont'd)

• Contractor	Rig No. •	Type Power •	Total HP All Main Mud Pumps •	Drawworks Make And Model •	Total HP Available to Drawworks •	Rated Depth With 4½-in. Pipe, 100 ft. •
ECTOR (Cont'd)						
Ladrido Drlg	1	dsl	1600	MC U15	1050	135
Loffland Bros	208	dsl	1580	Nat 110	1800	170
M G F Drlg-Midland	9	dsl	850	C-E GC500	850	140
Moran Bros	72	d-e	1300	Nat 110UE	1500	200
Norwood, A N	2	dsl	700	S/B N4	450	60
	3	gas	1000	S/B N4	450	80
	4	dsl	600	Nat T20	450	60
Price & Co, J A	3	dsl	1000	G-D Model 3000	370	50
Rod Ric	10	dsl	670	C-E G500	600	85
	7	dsl	900	W-M Hellhoist	900	100
	9	dsl	750	Idco H35	600	80
Sharp Drlg	370	d-e	1488	MC U712EC	1995	180
Trafalgar Drlg	1	dsl	680	Nat T20	486	75
Verna Corp	12	dsl	500	MC U15	600	115
	13	dsl	600	S/B N4	400	65
	14	dsl	500	Wils Mogul 42	550	70
	15	dsl	600	MC	600	115
	16	dsl	600	S/B N14	450	65
	17	dsl	550	MC U15	650	115
	18	d-e	1000	Nat 1320E	2000	220
	31	dsl	1212	MC U15	800	110
	34	dsl	1000	C-E A800	1200	150
	38	dsl	1212	MC U15	800	110
	40	dsl	700	MC U15	800	110
ERATH						
Lynx Drlg	1	dsl	1000	MC U15	720	100
	3	dsl	500	Idco H30	360	70
Min-Tex Drlg	34	dsl	400	Hyster B	500	75
FAYETTE						
Atco Drlg Southern	18	d-e	2000	Nat 80UE	1000	150
	55	dsl	2000	Nat 80UE	1000	150
Cinco Drlg	9	dsl	1700	Beth 650	1100	160
Louise Drlg	1	dsl	2684	Idco H40	1006	110
Pozos Intl Drlg Serv	1080	dsl	1500	Idco BIR6005	940	110
	80	dsl	1890	S/B N46	940	125
	961	dsl	1890	S/B N46	940	125
Rio Colorado Drlg	139	dsl	1200	Nat T45	900	100
Sterling Drlg (TX)	1	dsl	900	Nat 50A	900	120
	12	dsl	1500	Nat 610	1100	130
	15	dsl	1400	S/B N75	1100	140
	16	dsl	1250	Nat 610	1100	130
	19	dsl	1110	S/B N46	770	110
	7	dsl	850	Nat 50A	900	120
Williams Drlg of South TX	4	dsl	800	Idco BIR6085	950	115/4"
FISHER						
Bandera Drlg	11	dsl	925	BDW 450T	540	90
D B Drlg	21	dsl	410	S/B N4	420	75
Sojourner Drlg	2	dsl		MC U15	550	70
Wes-Tex Drlg	17	dsl	335	MC U34	500	80
FOARD						
Theiss Drlg	2	dsl	900	C-E U15	900	100
FORT BEND						
Bawden Drlg, Peter (TX)	26	mch	1550	Olwl 76	700	130
	3	d-e	2100	Nat 110E	1500	160
	5	mch	2000	Nat 110M	1500	1[illegible]
Kelley & Kerr Drlg	KK-2	d-e	2000	OIME SD7	1500	180
Padre Drlg	7	dsl	700	S/B H14610	750	100
Rosamond Drlg	8	dsl	2325	Nat 130	2475	250
Spartan Drlg	12	d-e	600	Sup 700UE	750	100
	14	mch	500	Sup 300PSD	500	65
	6	d-e	600	Sup 700UE	750	100
FRANKLIN						
United Drlg Div	2	dsl	1200	Beth M58	800	130
FREESTONE						
Butler-Johnson	14	d-e	2000	G-D 1100E	2000	200
Delta Drlg	90	d-e	2000	C-E D3 Type II	2592	160
FWA Drlg	20	dsl	1700	Wils Super Atlas	1040	140
Grace France Drlg	8	dsl	2400	Olwl 760E	2400	170
Hinton Drlg, W B	11	d-e	2800	Nat 1320UE	3000	250
	5	dsl	900	S-H 7000	450	100
	7	dsl	1800	Nat 80B	1650	150
Justiss Oil	30	dsl	1000	Beth 1013	1400	170
M N D Drlg-Southern	5	dsl	1536	S/B N95	1536	180
Rio Grande Drlg	8	dsl	550	Nat 370	770	100
Schlensker Drlg	20	dsl	1270	Nat 75CA	1270	140
Thunderbolt Drlg	53	dsl	1400	Wils 75	950	110
Verna Corp	28	dsl	1000	MC U15	600	100
FRIO						
Cactus Drlg Co	82	dsl	520	Idco H35	454	65
Sundown Drlg	6	dsl	600	S/B N42	550	110

TEXAS (Cont'd)

• Contractor	Rig No. •	Type Power •	Total HP All Main Mud Pumps •	Drawworks Make And Model •	Total HP Available to Drawworks •	Rated Depth With 4½-in. Pipe, 100 ft. •
GAINES						
Cactus Drlg Co	54	dsl	520	Beth S55	454	65
Cherokee Drlg & Dev	5	dsl	900	BDW 450	531	70
	6	dsl		BDW 450	670	70
Henley Drlg	219	dsl	1650	S/B N46	950	120
	8	dsl	2580	C-E D3	1720	140
Hondo Drlg	6	dsl	1000	MC U15	700	100
	7	gas	1000	S/B N55	750	120
	9	dsl	900	S/B N45	700	100
M G F Drlg-Midland	1	dsl	750	Beth M58	750	125
Rod Ric	3	dsl	670	S/B N45M	820	90
Sharp Drlg	62	dsl	1132	C-E D3	1272	140
Verna Corp	26	dsl	500	Idco H40	750	80
GALVESTON						
Goldrus Drlg	15	dsl	1740	Beth M810	1560	160
GARZA						
Douglas Drlg	2	dsl	900	BDW 650M	900	125
GCO Drlg	6	dsl	1000	Nat 370	650	95
Wes-Tex Drlg	4	dsl	650	C-E G500	650	10
GLASSCOCK						
Hondo Drlg	2	dsl	1050	S/B N55	700	100
Robinson Drlg of Texas	4	dsl	750	Nat 50A	900	125
Sharp Drlg	48	dsl	790	Beth M58	988	135
Wes-Tex Drlg	11	dsl	450	Beth S55	700	100
Willbros Drlg	5	gas	1100	Beth 450	1100	130
GOLIAD						
Corpus Christi Drlg	4	dsl	300	Wils Super 38	250	54
	5	dsl	300	Wils Super 38	250	80
Frio Drlg	5	d-e	1000	Idco ED1200	1200	160
GONZALES						
Bearden Drlg, Jack E	2	dsl	1500	Wils 75	900	90
Challenger Drlg	36	dsl	650	Nat G45	700	95
Cinco Drlg	2	dsl	890	Nat T32	850	80
	4	dsl	1005	S/B N45	780	85
Ladrido Drlg	2	dsl	1000	MC U15	1050	120
Williams Drlg of South TX	1	dsl	585	Cbot 750	750	95/4"
GRAY						
Hudson Drlg, Leonard	2	dsl	900	MC U15	900	115
	4	dsl	900	MC U15	900	115
	5	dsl	900	S/B N7	900	115
	7	dsl	900	Unit U15	900	115
Service Drlg (TX)	1	dsl	300	MC U34	300	45
Stahlco Drlg	1	dsl	510		475	50
GRAYSON						
Grace France Drlg	1	dsl	1600	G-D 700	900	130
Guffey-Schlensker Drlg	1	dsl	700	Unit U36A	933	110
Moran Drlg, E W	17	dsl	2000	Wils 250	2000	220
	3	dsl	1300	G-D	800	140
Schlensker Drlg	1	gas	700	Nat 75CA	1050	140
	4	gas	700	MC U15	800	100
Viersen & Cochran Drlg	19	dsl	800	Nat 610	830	120
GREGG						
Delta Drlg	69	dsl		S-H 7000	480	90
Justiss Oil	14	dsl	800	C-E GB500	900	110
	26	dsl	940	C-E GB500	940	120
	31	g-b	500	Wils Giant Roadair	650	100
	32	g-b	700	Beth 450	900	120
	34	g-b	700	Beth M58	1000	120
Nowotny & Conley Drlg	3	dsl	1800	S/B N46	900	130
GRIMES						
Bailey Drlg, Pernie	22	dsl	1500	OIME SL5	900	130
Big 6 Drlg	8	d-e	1600	Nat 610	900	120
Merit Drlg	10	d-e		Olwl 760E	1000	150
GUADALUPE						
Nixon Drlg	2	dsl	300	Crdw	300	40
	3	dsl	300	Crdw	300	40
HALE						
Chico Drlg	3	dsl	1300	C-E D2	1240	140
HANSFORD						
Baker & Taylor Drlg	10	dsl	870	MC U15	870	110
	14	dsl	1140	MC U40	1140	180
	18	dsl	700	C-E GB250T	485	60
Drillers	23	dsl	600	MC U15	600	100
Sage Drlg	3	dsl	400	Idco H40	400	85

TEXAS (Cont'd)

• Contractor	Rig No. •	Type Power •	Total HP All Main Mud Pumps •	Drawworks Make And Model •	Total HP Available to Drawworks •	Rated Depth With 4½-in. Pipe, 100 ft. •
HARDEMAN						
Bearden Drlg, Jack E	8	dsl	1200	Wils 75	900	95
Crawford Drlg	10	dsl	800	C-E GB800	800	140
	11	dsl	800	Nat 50A	800	110
	2	dsl	800	MC U15	800	100
	3	dsl	350	Wils Giant	350	65
	4	dsl	800	MC U15	800	100
	5	dsl	800	MC U15	800	100
	6		800	MC	800	100
	7	dsl	800	MC U15	800	100
	8	dsl	350	Olwl 64B	350	95
	9	dsl	350	Wils Roadaire	350	70
Lee Drlg	3	dsl	1100	BDW 450T	700	90
Lin-Mour Drlg	33	gas	550	Wils Giant	550	95
Moran Drlg, E W	19	dsl	1200	Wils 75	900	110
	23	dsl	1400	Wils 75	900	110
Schlensker Drlg	2	gas	700	Beth MC450	900	120
HARDIN						
Frio Drlg	1	dsl	800	C-E 350	550	95
Goldrus Drlg	18	dsl	1700	1000 Cbot	872	140
M G F Drlg-Houston	32	dsl	750	Nat 610	800	120
Pozos Intl Drlg Serv	81	dsl	1890	S/B N46	940	125
Stone Drlg, M L	2	gas	300	Wils Jr	100	20
	6	g-b	100	Coop-Small	100	
	8	dsl	350	Wils Super	200	30
HARRIS						
Big 6 Drlg	6	dsl	800	Cbot	950	120
Blocker Drlg-Houston	45					200
	46					200
Drillers	11	d-h	1500	Automatic H2000	2000	120
	15	dsl	1000	Olwl 66	800	120
	5	dsl	900	MC U15M	1200	110
Haning & Young Drlg	201	d-e	2600	S/B NE95	1700	190
	202	d-e	2600	S/B NE95	1700	190
M N D Drlg-Southern	7	dsl	1540	BDW 800	770	100
Parker Drlg	129-HH/ 17	dsl	1500	OIME TBA2000	1700	200
	133-HH/ 21	dsl	1500	OIME TBA2000	1700	200
Rio Colorado Drlg	138	dsl	1750	Idco H1000	1000	110
	141	dsl	1200	Nat T45	900	100
Southland Drlg	4	dsl	850	S/B N7	900	100
HARRISON						
Dixon Drlg	7	dsl	1700	S/B N46	950	125
Exeter Drlg Southern	45	dsl	2000	G-D 700	1000	125
Gibson Drlg	3	dsl	820	Wils Mogul 42	666	65
Justiss Oil	15	dsl	450	Beth 45E	300	65
	21	dsl	800	C-E GB500	1000	120
	33	dsl	1000	Olwl 96	1400	170
Lohmann Drlg	17	gas	800	MC U15 SN356	600	100
Maxwell Herring Drlg	21					
United Drlg Div	8	dsl	1600	Beth M58	1200	130
HASKELL						
Bandera Drlg	10	dsl	775	MAC 300	475	75
Hack Drlg	3	dsl	350	Beth S45E	350	70
Sojourner Drlg	5	dsl	250	MC U15	550	70
	6	dsl		MC U15	550	70
Wes-Mor Drlg	1	dsl		MC U15		80
	12	dsl	2500	MC U15	2500	90
Wes-Tex Drlg	14	dsl	335	S/B N4	500	80
	19	dsl	600	S/B N4	600	80
HEMPHILL						
Baker & Taylor Drlg	11	dsl	1140	C-E GCA500	1140	120
	19	dsl	870	MC U15	870	110
	4	dsl	1140	MC U20	1140	180
	5	dsl	1400	MC U20	1400	220
	8	dsl	870	MC U15	870	110
Bonray Drlg	5	gas	700	Nat 50A	700	90
Bravo Drlg	3	dsl	870	BDW 800	870	140
Helmerich & Payne Intl Drlg	85	d-s	1700	Olwl 760E	750	160
Hickman Drlg	2	dsl	1150	BDW 650	800	120
Hudson Drlg, Leonard	6	dsl	550	S/B N7	900	120
King Drlg	1	dsl	1177	Crdw 700	800	120
	9	dsl	1177	Crdw 700	800	125
Moran Bros	68	d-s	3200	C-E C2 Type II	2000	250
Moran Drlg, E W	13	dsl	1400	G-D 700	800	130
Quarles Drlg	3	dsl	2000	OIME 1000	1000	180
Robinson Bros Drlg	1	dsl	1750	S/B N75	1500	120
Service Drlg (TX)	4	dsl	500	MC U15	800	92
Unit Drlg & Expl	15	dsl	1300	MCSCO 914C	1850	250
HENDERSON						
B-E Drlg	1	dsl	900	C-E A500	900	100
Challenger Drlg	29	dsl	720	Nat T45	860	95
Delta Drlg	22	dsl	1800	C-E D3 Type III	1560	140
	44	dsl	2000	S/B N95	1560	160
HIDALGO						
Alanco Drlg	1	dsl	800	Idco H40	500	85
Atco Drlg Southern	11	dsl	1300	Nat 55	550	120
Delta Drlg	94	d-s	2000	C-E D3 Type II	2592	180
Dixilyn-Field Drlg	12	dsl	2600	Nat 110M	2331	180
	18	dsl	2245	MC U914C		200
	9	dsl	2650	Nat 130	2331	250
Magee-Poole Drlg	1	dsl	1500	Cbot 900	950	110/ 4"
	15	dsl	1475	Cbot Expl III	700	90/ 4"
Resource Drlg	16	dsl	1560	Nat 80B	1835	140
	3	dsl	3105	Nat 1320	3740	250
Willis Drlg	2	dsl	1000	Beth B-Line MC450	1000	120
	3	dsl	1000	S/B N75	1000	120
	6	dsl	3000	Idco	3000	250
HOCKLEY						
Chico Drlg	1	dsl	1100	BDW 650M	878	125
Norton Drlg	1	dsl	450	Wils 65P	850	100
	4	dsl	550	Wils 75	850	105
	8	dsl	550	Wils 75	900	140
Rod Ric	8	dsl	670	S/B N45	600	80
Sitton Drlg	1	dsl	450	Wils 600	525	65
	4	dsl	650	Wils 75P	900	100
	5	dsl	450	Wils 75P	900	115
Verna Corp	3	dsl	500	S/B N45	500	65
	33	dsl	550	MC U15	800	90
	36	dsl	550	MC U15	550	110
	39	dsl	600	MC U15	550	110
	4	dsl	500	S/B N4	500	65
	5	dsl	500	Wils Mogul	500	65
	6	dsl	550	S/B N55	800	120
	7	dsl	700	MC U15 Type	800	110
	8	dsl	500	Idco H40	500	65
	9	dsl	600	Idco H40	500	65
Wes-Tex Drlg	22					
HOPKINS						
FWA Drlg	26	dsl	2000	G-D 800M	1560	140
Justiss Oil	10	dsl	500	S/B N45	600	100
Lester Drlg, Dan	8	dsl	1850	Olwl 760	1500	160
HOUSTON						
Atco Drlg Southern	59	d-e	2600	C-E 11C	2000	180
Bawden Drlg, Peter (TX)	15	d-c	1600	Nat 610E	750	120
Helmerich & Payne Intl Drlg	87	d-s	800	Nat 1625ME	3000	300
Loffland Bros	118	d-e	3300	MC U1220EBD	3300	250
Noble Drlg	N-59	dsl	800	Nat 55	800	120
Nowotny & Conley Drlg	5	d-e	3200	C-E C3 Type II	3000	300
Schlensker Drlg	5	dsl	950	MC U15	950	100
Westburne Drlg Canada	55	d-s	3310	Nat 1320UE	3310	220
	72	dsl	870	Nat T32	360	75
HOWARD						
BJM Drlg & Expl	5	dsl	120	MC U15	1000	120
Corky Drlg	1	dsl	325	Crdw 350	350	60
Flacus Drlg	1	dsl	350	Wils Super 385	200	32/ 4"
Moran Bros	54	dsl	970	Nat T20	300	60
Riley Drlg	4	dsl	300	Cbot	300	45
Safari Drlg	4	dsl	310	Nat T20	270	60
Sloan Drlg	24	dsl	600	Nat 50A	800	100
T O T Drlg	1	dsl	1155	OIME SL5	1155	150
TMBR Drlg	4	dsl	640	Nat 50CA	600	105
Willbros Drlg	3	dsl	800	MC U15	800	110
HUTCHINSON						
Diatom Drlg	1	dsl	456	I-R 550	574	75
	2	dsl	630	I-R 600	650	100
IRION						
FWA Drlg	12	dsl	915	Wils Giant	900	100
	14	dsl	900	Wils Mogul 42	600	75
JACK						
Bearden Drlg, Jack E	9	dsl	1200	Wils Mogul Super 42	900	90
Bennett Prod Corp	2	dsl	900	MC U15	900	130
E & H Drlg	1	dsl	700	MC U15	700	75
	5	g-l	550	Wils Giant	550	75
Megargel Drlg	4	dsl	350	Beth S45B	275	53
Oilwell Drlg	2	dsl	476	Beth 550	476	70
JACK (Cont'd)						
Originals Drlg	1	dsl	400	Wils Super 38	400	60
	2	dsl	400	Wils Giant	400	70
	3	dsl	400	Nat 50A	400	85
Simmons Drlg	46	dsl	350	Troy M600	350	75
JACKSON						
Nicklos Drlg	76	d-e	2600	Nat 1320UE	1800	250
JASPER						
Henley Drlg	1	dsl	1725	OIME SL1000	1725	140
Resource Drlg	17	dsl	1560	Nat 80B	1835	140
Richards Drlg	11	dsl	2500	Olwl 860	2400	180
JEFFERSON						
Bawden Drlg, Peter (TX)	4	d-s	2000	Nat 80UE	1000	140
Big Chief Drlg	11	dsl	1350	S/B N75	1350	130
	22	gas	1600	Nat 80B	1600	140
	25	dsl	3000	Nat 110	2000	200
	35	gas	2610	Nat 110	2610	200
	44	dsl	2400	S/B N95	2400	200
Delta Drlg	20	d-s	2600	C-E C2 Type II	3456	200
	31	dsl	2300	C-E C1 Type III	2592	200
Drillers	51	d-h	400	Shaf CSD820	400	10/ 8.63"
Goldrus Drlg	19	dsl	1110	Cbot 750	560	100
	21	dsl	1200	Cbot 1000	872	135
	23	dsl	870	Cbot 900	680	120
Loffland Bros	110	dsl	2180	S/B N12	2400	200
Power Rig Drlg	16	d-s	2600	C-E C1 Type II	3084	180
United Drlg Div	6	dsl	1200	Beth M58	800	130
JIM HOGG						
Challenger Drlg	46	dsl	900	Idco 750	900	100
Cinco Drlg	14	d-e	2400	OIME SD5	1500	140
Eagle Prod & Drlg Serv	2	d-e	2000	Olwl E2000	2000	250
Magee-Poole Drlg	2	dsl	1500	OIME 750SL	1155	140
JIM WELLS						
Blocker Drlg-Alice	14	dsl	2500	Nat 110	2730	200
	15	dsl	1265	Cbot 900	950	100
	16	dsl	1080	Cbot Expl III	950	120
	17	dsl	825	S-H	530	70
	2	dsl	1130	Cbot 750	650	95
	3	dsl	1820	Cbot Expl III	950	120
	4	dsl	1800	Nat 55	1500	120
	8	dsl	1820	Cbot Expl III	1400	140
	9	dsl	1115	Idco H1000	950	100
Dixilyn-Field Drlg	10	dsl	1295	Nat 55	1040	120
	19	dsl	1925	Nat 130	2331	200
	2	dsl	1300	Nat 610	1040	120
	4	dsl	2600	Nat 1625M	3105	300
	8	dsl	1950	Nat 110	1638	160
Murtynson Drlg	10	dsl	1000	MC U15	600	100
Murphy Drlg, Pete	1	dsl	800	Crdw C Horse	300	60
JONES						
Dixon Drlg	11	dsl	700	Nat T20	450	75
	9	dsl	700	S-H 5000 Port	450	60
Hack Drlg	1	dsl	350	S/B N4	350	70
	4	dsl	225	Nat T8	250	40
KARNES						
Atco Drlg Southern	52	dsl	1500	MC U40	900	120
B D K Drlg	9	dsl	1480	S/B N75	1000	120
Cinco Drlg	1	dsl	900	MC U15	780	110
Delta Drlg	87	d-s	2000	C-E D3 Type II	2592	160
Harkins & Co	12	dsl	1050	Cbot 750	650	95/ 4"
KENEDY						
Magee-Poole Drlg	10	dsl	1500	Cbot 900	950	110/ 4"
Rio Grande Drlg	7	dsl	750	OIME SL5	1500	120
KENT						
Lee Drlg	1	dsl	1100	BDW 450T	500	90
Norton Drlg	11	dsl	550	Wils 75	900	120
Safari Drlg	2	dsl	370	Crdw L350	370	70
Verna Corp	10	dsl	700	MC U36A	1200	120
KING						
Lin-Mour Drlg	3	gas	250	MC U34	180	50
	8	gas	400	C-E G42	400	65
Wes-Mor Drlg	5	g-b	465	MC U15	290	75
KLEBERG						
Dixilyn-Field Drlg	25	dsl	1600	Nat 80UE		150
PRC Drlg	9	dsl	1140	RMI 4610	1140	160
KNOX						
Bearden Drlg, Jack E	1	dsl	1200	Wils Mogul Super 42	750	90
Megargel Drlg	6	dsl	350	Beth S45B	275	60
Wes-Tex Drlg	21	dsl	350	MC U34	450	70

TEXAS (Cont'd)

• Contractor	Rig No. •	Type Power •	Total HP All Main Mud Pumps •	Drawworks Make And Model •	Total HP Available to Drawworks •	Rated Depth With 4½-in. Pipe, 100 ft. •
LA SALLE						
Delta Drlg	63	d-e	2600	C-E C1 Type II	2592	160
Harkins & Co	14	dsl	1150	Cbot 900	900	110/ 4"
PRC Drlg	4	dsl	758	Cbot 900	900	100
San Patricio Corp	6	dsl	1500	Shaf 800	900	130
Williams Drlg of South TX	2	dsl	1280	Cbot 900	900	105/ 4"
LAVACA						
Delta Drlg	81	dsl	1300	S-H 7000	480	90
Frio Drlg	3	dsl	900	S/B N55	900	105
FWA Drlg	16	dsl	1350	Wils Mogul 42	730	90
	25	dsl	2000	Wils 120	1560	160
Harkins & Co	3	dsl	1260	S/B N75A	1260	125
M N D Drlg-Southern	11	d-e	1820	S/B N95	1820	200
	14	d-e	1820	MC U712	1200	160
PRC Drlg	10	dsl	1075	Coop LTO700	550	95
Resource Drlg	14	dsl	2330	Nat 110	2740	180
Spartan Drlg	17E	d-s	1000	Olwl 760E	1000	160
LEE						
Hondo Drlg	8	dsl	1100	S/B N45	700	120
Houtech Drlg	802	dsl	1600	G-D 700M	1200	150
M G F Drlg-Houston	6	dsl	600	Nat T32	500	90
	7	dsl	700	S/B N55	800	110
	8	dsl	600	MC U15	550	105
M G F Drlg-Midland	6	dsl	750	Nat T32	750	90
	7	dsl	850	S/B N55	850	120
	8	dsl	800	MC Rig U15	800	100
Padre Drlg	9	dsl	1300	S/B 4610	450	85
Spartan Drlg	18UE	d-s	600	Sup 700UE	700	120
Sterling Drlg (TX)	10	dsl	1400	S/B N75	1100	130
LEON						
Cape Drlg	2	dsl	1000	S/B TR7W	600	85
	5	dsl	400	W-N Apache 95040	425	60
Culver Drlg	6	d-e	2000	G-D 2100	2000	300/ 5"
Delta Drlg	40	dsl	1500	C-E D2 Type III	784	110
Dual Drlg	7	dsl	3400	Nat 1320M	2000	250
FWA Drlg	28	dsl	2700	G-D 1100M	1560	180
Justiss Oil	36	dsl	1000	1013	1200	160
Tesoro Drlg	4	dsl	2600	Nat 1320M	2742	250
LIBERTY						
Bailey Drlg, Pernie	21	dsl	500	C-E J750	800	110
Big 6 Drlg	7	dsl	800	Idco	600	100
Richards Drlg	8	dsl	2500	Olwl 860	2400	180
LIMESTONE						
Atco Drlg Southern	53	dsl	1600	Nat 610UE	800	120
Delta Drlg	5	dsl	2000	Nat 100	1560	160
M N D Drlg-Southern	2	dsl	1794	S/B N75	1024	140
	4	dsl	1540	G-D 1100	1540	180
Rosamond Drlg	5	dsl	1450	Beth MC450	1275	135
LIPSCOMB						
Hudson Drlg, Leonard	3	dsl	900	MC U15	900	115
H30 Drlg	8	dsl	600	Idco H40	600	100
Moran Drlg, E W	26	dsl	1000	CEI 75D	750	110
ONEOK Drlg	2	d-e	1410	MC 36	1000	140
Service Drlg (TX)	13	dsl	400	MC U1500	800	120
Slawson Drlg	7	dsl	480	Idco H35	480	75
Unit Drlg & Expl	1	dsl	500	MC U15	800	110
LIVE OAK						
Bawden Drlg, Peter (TX)	30	d-m	1850	C-E D3 Type III	1000	150
Buzzini Drlg	9	dsl	3600	Olwl M2000	2400	200
FWA Drlg	24	dsl	1350	Wils Mogul 42	720	110
Harkins & Co	10	dsl	1620	C-E B1013	1620	180
	11	dsl	1260	S/B N75	1260	125
Kelley & Kerr Drlg	KK-3	d-e	2000	OIME SD7	1500	180
Loffland Bros	88	d-e	2160	MC U712	2400	160
Magee-Poole Drlg	6	dsl	2000	OIME SL7	1300	168
	9	dsl	2350	Cbot	1500	160
Nicor Drlg	51	d-m	1600	Idco H900M	1000	150
Penrod Drlg	16	dsl	3075	S/B N12A	1840	200
South Texas Drlg	7	dsl	910	Idco H1200	1206	150
LOVING						
Cactus Drlg Co	2					
	30					
	64	dsl	520	S/B N45	670	75
Cactus Drlg Corp	2	dsl	2550	C-E A1500	2550	230
	30	dsl	1650	Nat 110	1650	230
Loffland Bros	117	d-e	3300	MC U1220EBD	3300	250
	37	d-e	2160	MC U914B	2400	200
Parker Drlg	184	g-s	3000	OIME G3000	3000	300
	198	gas	1600	OIME 1500	1600	220
	39	gas	1600	OIME Hercules 2500M	1600	230
LOVING (Cont'd)						
Rod Ric	6	dsl	450	Beth S45E	450	70
Rowan Drlg US	8	dsl	2600	MC U1220S	2400	250
Santa Fe Drlg	6	d-e	2600	C-E C111	2700	300
Sharp Drlg	43	dsl	2331	Olwl M2000	2742	300
	55	dsl	2321	G-D 2100	2742	300
	66	d-e	2331	MC U1220EB	2742	300
LUBBOCK						
D B Drlg	1	dsl	720	S/B N4	540	75
	23	dsl	390	Beth S45E	700	90
	3	dsl	675	S/B N4	480	70
Norton Drlg	3	dsl	475	Wils 75	850	105
Sitton Drlg	8	dsl	650	Wils 75P	900	100
McMULLEN						
Cinco Drlg	12	d-e	3000	Nat 1320UE	2400	240
Magee-Poole Drlg	8	dsl	1500	Cbot 900	950	110/ 4"
Penrod Drlg	124	dsl	1600	Nat 1625M	3000	300
Resource Drlg	5	dsl	2330	Nat 110	2740	180
South Texas Drlg	6	dsl	650	S/B N46	800	100
MADISON						
Cape Drlg	6	dsl	1500	MIDWAY 750D	800	135
Gibson Drlg	5	dsl	1030	Wils 75P	700	90
Loffland Bros	322	dsl	1800	G-D 800	2100	160
M G F Drlg-Houston	38	dsl	1600	C-E C1	1200	170
Nicklos Drlg	78	dsl	1400	Nat 80B	1080	140
Penrod Drlg	125	dsl	1000	Nat 80B	1760	150
Spartan Drlg	15E	d-s	600	Sup 700E	750	120
	4	d-e	600	Sup 700UE	750	100
United Drlg Div	11	dsl	1100	Nat 370	800	100
	5	dsl	1200	S/B N75	1200	150
Verna Corp	35	dsl	1000	Idco 711SJ	1200	140
	37	dsl	1212	MC U15	550	110
MARION						
Lester Drlg, Dan	10	dsl	1800	Olwl 860	2400	200
	9	dsl	1500	Olwl 760	1500	160
MARTIN						
BJM Drlg & Expl	4	dsl	1200	MC U15	1000	120
FWA Drlg	17	dsl	1400	Wils Giant	900	110
Holliday Drlg	2	dsl	1200	Olwl 76	1200	140
Moran Bros	4	d-s	1500	C-E A800E	1000	150
Tahoe Drlg	2	dsl	800	C-E D1	800	100
	3	dsl	1000	C-E D2	1200	135
TMBR Drlg	5	dsl	700	Nat 50CA	600	105
MATAGORDA						
Bailey Drlg, Pernie	23	dsl	1600	OIME SL7	1400	150
Bawden Drlg, Peter (TX)	31	d-s	2000	Nat 110UE	1500	180
Frio Drlg	4	dsl	1100	Nat N55	1100	120
Nicor Drlg	79	d-m	2000	Wils Titan	1350	140
	9	dsl	2000	OIME 1500SL	1500	180
Padre Drlg	10	dsl	1300	S/B 4610	450	85
Resource Drlg	15	dsl	1580	Nat 80B	1835	140
Richards Drlg	5	g-b	1200	S/B N75	900	125
MAVERICK						
Challenger Drlg	20	dsl	900	S/B N75	1000	120
F & N Drlg	1	dsl	525	Kremco K600	600	80
MENARD						
Banders Drlg	2	dsl	470	MC U34	380	65
MIDLAND						
Britton Inds Drlg	1	dsl	1000	Olwl 76	800	150
BJM Drlg & Expl	6	dsl	1200	MC U15	1000	120
Cactus Drlg Co	11					
	15					
	31					
	32	dsl	1830	Nat 110	2700	200
	34					
	4					
	7					
Cactus Drlg Corp	11	dsl	570	C-E C350	570	
	15	dsl	1200	Beth 650	1200	150
	31	dsl	2550	Nat 1320	2550	250
	32	dsl	2550	Nat 1320	2550	250
	33	dsl	2550	Nat 110	2550	200
	34	dsl	1200	Nat 75	1200	115
	4	dsl	1100	Nat 55	1100	130
	7	dsl	1650	Olwl 76	1650	140
Cherokee Drlg & Dev	7	dsl	1500	BDW 650	1050	120
FWA Drlg	2	dsl	1100	Wils Super Giant	1040	130
Hurt & Assoc, Clint	11	dsl	1200	Wils 75	900	110
	9	dsl	1300	Wils 75	900	110
John Drlg	9					
Ladrido Drlg	4	dsl	1200	J750	1050	140
Lanex Drlg	C-10	d-s	1600	Unit U36	650	120
	C-11	d-s	1600	BDW 800	800	160
	C-12	d-s	1600	BDW 800	800	160
MIDLAND (Cont'd)						
M G F Drlg-Midland	10	dsl	900	Beth M58	900	120
	201	dsl	1600	Nat 1320UE	2000	300
	202	dsl	1600	Nat 1320 UE	2000	300
	203	dsl	1300	Nat 110UE	2000	200
	22	dsl	1500	Olwl 760	1500	150
	25	dsl	1725	S/B N95	1725	190
	3	dsl	500	Nat 32	400	70
	5	dsl	500	C-E GA250	400	90
Robinson Drlg of Texas	3	dsl	750	MC U15	900	100
Sharp Drlg	47	dsl	790	Beth M58	988	135
Sterling Drlg (TX)	16	dsl	1400	S/B N75	1230	140
	17	dsl	1500	S/B N75	1230	140
	22	dsl	1520	Nat 610	1100	130
	3	dsl	800	Nat 50CA	820	100
	4	dsl	1075	Nat 50A	900	120
	9	dsl	1350	S/B N75	1100	140
Tierra Drlg	10	dsl	650	BDW 650	700	105
	11	dsl	650	BDW 650	700	120
	12	d-e	750	BDW 800MX	1000	140
	15		1000	MC U712EA	1200	160
	19	d-e	800	MC U36EA	650	120
	20	d-e	800	BDW 800	800	140
	21	d-e	800	BDW 800	800	140
	6	dsl	850	S/B N4	800	80
	9	dsl	650	MC U15	700	100
Tri-Service Drlg	6	dsl	1800	Olwl 96	1800	160
	7	dsl	2475	Nat 110M	2475	180
Verna Corp	19	dsl	550	MC U15	800	115
	20	dsl	1000	Verna Drlg	1500	160
MITCHELL						
D B Drlg	6	dsl	1050	S/B N45	650	90
Delta Drlg	86	dsl	500	S-H 7000	480	90
Riley Drlg	2	dsl	300	Nat	300	45
	3	dsl	300	MC U34	225	40
MONTAGUE						
Bennett Prod Corp	1	dsl	900	MC U15	900	130
	3	dsl	900	MC U15	900	130
	4	dsl	900	Permian 1000	900	130
Burns L D Drlg	2	dsl	900	Wils 75	780	105
Lin-Mour Drlg	6	dsl	700	Wils Giant	700	90
Maxwell Drlg	1	dsl		Nat U15		100
	5	dsl		Beth M650		120
Min-Tex Drlg	31	dsl	500	Hyster A	550	100
Schlensker Drlg	8	dsl	635	Wils Mogul 42	475	70
MONTGOMERY						
Cliffs Drlg	33	dsl	2000	Nat 80B	1650	145
M N D Drlg-Southern	12	d-e	1820	MC U712	1200	160
	15	d-e	2000	MC U712	1200	160
	3	dsl	1794	S/B N75	1024	125
	9	dsl	1540	G-D 500	770	105
Pozos Intl Drlg Serv	581	dsl	3000	S/B N12A	2650	250
Resource Drlg	RD-20	dsl	1040	Nat 610	1220	120
	19-RD	dsl	1040	Nat 610	1220	120
Southland Drlg	6	dsl	600	HT 1887600TD	600	85
	7	dsl	850	S/B N55	600	100
MOORE						
Service Drlg (TX)	7	dsl	300	Beth S45	300	55
NACOGDOCHES						
Gibson Drlg	12	dsl	900	C-E D2	900	120
Murco Drlg	38	d-s	1700	Olwl 860E	700	120
	6	dsl	2200	S/B N95	1000	140
Noble Drlg	OW-77	dsl	800	Olwl 760	800	140
Rotary Drlg	10	dsl	850	S-H 7000	700	106
	9	dsl	800	C-E	700	105
Schlensker Drlg	6	dsl	950	MC U15	950	100
	9	dsl	1500	OIME 1500SL	2205	180
Thunderbolt Drlg	50	dsl	1750	Cbot 1200	1300	135
Verna Corp	32	dsl	1212	Verna U15	500	110
NAVARRO						
Schlensker Drlg	3	dsl	700	Olwl 760	1500	140
NEWTON						
Explorer Drlg	8	dsl	1836	Idco H1700	2000	150
NOLAN						
Dixon Drlg	6	dsl	900	S/B N42	650	80
Sojourner Drlg	1	dsl		MC U15	550	70
	3	dsl		MC U15	550	70
Wes-Tex Drlg	12	dsl	335	S/B N4	500	80
	7	dsl	335	S/B N4	450	80
NUECES						
CRC Mallard Well	16	dsl	1300	Wils 90	800	140
Delta Drlg	89	d-s	2000	C-E D3 Type II	2592	180
J 3 Drlg	1	dsl	1375	MC U36A	950	140
	2	dsl	1650	MC U36A	950	140
	3	dsl	1100	MC U34B	750	85
	4	dsl	1100	MC U34B	750	85
	5	dsl	2470	MC U914	2470	200

TEXAS (Cont'd)

• Contractor	Rig No. •	Type Power •	Total HP All Main Mud Pumps •	Drawworks Make And Model •	Total HP Available to Drawworks •	Rated Depth With 4½-in. Pipe, 100 ft. •
NUECES (Cont'd)						
Padre Drlg	3	dsl	700	RMI	800	100
Penrick Drlg	101	d-e	2000	Nat L130	2000	200
	102	d-e	3200	MC U1220	2000	300
	103	d-e	2200	S/B NE46	900	140
	104	d-e	2200	S/B DH14610A	900	120
	105	dsl	1300	CABOT 550	800	80
	106	d-e	3200	Beth 1013	2000	160
PRC Drlg	2	dsl	880	MC U34	460	75/4"
	5	dsl	1198	G-D 700M	800	130
	8	dsl	770	S/B N95A	777	200
San Patricio Corp	7	dsl	1000	S/B RR600	400	80
OCHILTREE						
Baker & Taylor Drlg	12	dsl	870	MC U15	870	110
Bravo Drlg	2	dsl	870	BDW 800	870	140
Dual Drlg	36	dsl	2000	Olwl 760	1000	160
Hudson Drlg, Leonard	1	dsl	900	MC U15	900	115
Jones Drlg Co, Loyd	88	dsl	1200	Cbot 750	750	100
Mercury Drlg	11	dsl	750	C-E U15	900	90
	4	dsl	750	MC U15	980	120
Rine Drlg	4	gas	750	S/B N75	750	120
Robinson Bros Drlg	17	dsl	600	G-D 500	650	90
Unit Drlg & Expl	3	dsl	700	Nat 50A	800	110
	4	dsl	500	MC U15	800	110
OLDHAM						
Baker & Taylor Drlg	1	dsl	870	MC U15	870	100
	7	dsl	870	MC U15	870	110
	9	dsl	870	MC U15	870	110
ORANGE						
Southland Drlg	1	dsl	700	C-E GB500	700	100
	2	dsl	1300	S/B 75A	1150	120
	3	dsl	1300	S/B N75	750	110
PALO PINTO						
Carter Dev	2	dsl	300	Wils Mogul	300	60
Lowe Drlg	2	dsl	475	MC U34	475	60
PANOLA						
Exeter Drlg Southern	57	dsl	1500	C-E D3	1500	160
Murco Drlg	34	dsl	2200	Olwl N780	1350	150
Wheless Drlg	2	dsl	1200	C-E D2	1200	110
PARKER						
J & W Drlg	1	g-d	180	Harris 5000	340	50
Min-Tex Drlg	26	dsl	700	Crdw L	350	40
PECOS						
Cactus Drlg Corp	1	dsl	1650	Nat 110	1650	200
Cherokee Drlg & Dev	3	dsl	1150	Wils 75	900	110
	4	gas	1150	Wils 75	900	110
Delta Drlg	100	d-e	2000	C-E D3	1560	160
	36	dsl	2600	C-E C2 Type III	2331	230
Hillin Drlg	2	dsl	800	C-E G500	800	110
	5	dsl	1200	Nat H1200	1200	150
Kenai Drlg of Texas	13	dsl	800	C-E GA250T	400	65
Loffland Bros	112	d-e	3300	MC U1220EB	2200	250
Parker Drlg	121	d-e	2700	Idco E3000	3000	300
	16	gas	1000	Olwl 76	1000	160
	74	gas	1400	Nat 100M	1400	225
	87	gas	1800	Idco E2000	1800	250
	89	gas	1600	Nat 1320	1600	230
Penrod Drlg	111	dsl	1950	Nat 1625M	3000	300
	114	dsl	1600	Nat 1625M	3000	300
	121	dsl	1600	Nat	3000	300
Resource Drlg	2	dsl	1560	Nat 80B	1835	140
Rowan Drlg US	12	dsl	2000	Nat 1320M	2100	180
Santa Fe Drlg	14	dsl	3200	C-E C3E	2000	300
	16	dsl	2000	C-E C2	2000	250
	2	gas	1850	Beth B1013	2118	210
	3	d-e	2600	C-E A1500E	2700	300
	4	d-e	2600	C-E C111E	2700	300
	8	d-e	2600	C-E A1500E	2700	300
Sharp Drlg	34	dsl	2331	Beth 1013	2742	300
	60	d-e	3108	C-E C3 Type II	3658	300
	64	dsl	1580	Olwl 780	1836	180
	73	d-e	4250	C-E C3	4640	300
T O T Drlg	3	dsl	1155	OIME SL5	1155	150
Tahoe Drlg	4	dsl	950	G-D 500M	950	120
Tri-Service Drlg	2	dsl	1400	Olwl 66	900	100
	5	g-b	1800	Olwl 780	1400	180
TMBR Drlg	18	dsl	500	MC U15CA	840	100
Wes-Tex Drlg	2	dsl	650	Beth S45E	650	100
Willbros Drlg	6	dsl	800	C-E G500	800	120
POLK						
Delta Drlg	8	dsl	2800	C-E C1 Type III	2582	220
POLK (Cont'd)						
Forex Neptune and/or Affil	46	d-e	3200	G-D 1500E	2000	217
Goldrus Drlg	5	d-e	3400	Olwl E2000	1700	200
RAINS						
Delta Drlg	54	dsl	2000	Nat 80B	1560	140
Goldrus Drlg	3	d-e	1700	Olwl E2000	3400	200
Penrod Drlg	107	dsl	1000	Nat 80B	1760	150
Transcontinental Drlg-Magnolia	35	dsl	1000	G-D 800M	1000	150
REAGAN						
FWA Drlg	30	dsl	1100	Wils Giant	900	100
	4	dsl	1365	Wils Giant	900	110
	8	dsl	1065	Wils Giant	900	110
M G F Drlg-Midland	2	dsl	800	MC U15	800	100
Prairie States Expl	1	dsl	1000	Nat 50CA	660	110
Sterling Drlg (TX)	11	dsl	375	Idco H30	460	65
Tahoe Drlg	1	dsl	900	Nat 50CA	1000	110
Transcontinental Drlg-San Angelo	33	dsl	898	Unit U15	850	85
Tri-Service Drlg	4	g-b	700	Olwl 66	700	100
TMBR Drlg	26	dsl	700	G-D 500	700	110
REEVES						
Cactus Drlg Co	60	dsl	520	Beth S45E	454	65
Henley Drlg	2	d-e	2600	C-E C2	2000	250
Kenai Drlg of Texas	18	dsl	410	Idco H35	450	65
Parker Drlg	88	g-e	2700	Nat 130	3000	300
Santa Fe Drlg	5	gas	2600	Beth B1013	2118	220
Sharp Drlg	59	dsl	2331	Beth MC950	2742	230
	72	d-e	2160	Olwl 840E	2430	220
Verna Corp	11	dsl	550	MC U15	810	115
Willbros Drlg	9	d-s	3000	Idco E1700	3000	250
REFUGIO						
J & C Drlg	9	dsl	1050	Wils 600	630	90
Padre Drlg	2	dsl	500	S/B H4210	400	75
	8	dsl	700	S/B H14610	750	100
ROBERTS						
Baker & Taylor Drlg	6	dsl	1400	MC U40	1400	200
Sage Drlg	4	dsl	800	MC U15	800	110
Service Drlg (TX)	11	dsl	400	MC U34	400	50
Triad Drlg	6	dsl		S/B N95A	1650	200
Zenith Drlg	3	dsl	800	S/B N75	800	100
	5	dsl	1100	BDW 800	1100	160
RUNNELS						
Bandera Drlg	6	dsl	600	MC U34	360	65
	7	dsl	750	MAC 300	400	75
Mesa Drlg	2	dsl	675	Weis W45	500	80
	3	dsl	675	MAC 300	550	80
RUSK						
Coliseum Drlg	3	dsl	1200	S/B N72W	912	120
D B Drlg-Shreveport	27	dsl	750	Nat 50A	750	110
Delta Drlg	64	dsl	1500	C-E D2 Type III	784	110
Gibson Drlg	11	dsl	1200	C-E D2	1200	120
	2	dsl	526	Wils Mogul 65	398	50
	6	dsl	506	Wils Mogul 42	318	50
Hinton Drlg, W B	9	d-e	2600	Nat 110UE	3000	200
Loffland Bros	203	dsl	1140	MC U15	1000	100
Rainbow Drlg	4	dsl	1600	Cbot 1200	1200	140
Verna Corp	22	dsl	550	MC U15	600	100
Woolf & Magee	11	dsl	850	Beth S45E	500	95
SABINE						
Challenger Drlg	47	dsl	700	G-D 500	600	80
SAN JACINTO						
Delta Drlg	69	d-e	3200	C-E C2	3456	250
SAN PATRICIO						
Cinco Drlg	11	d-e	2000	Sup 1000	1000	160
Harkins & Co	13	dsl	1477	Cbot 1000	1000	120
San Patricio Corp	5	dsl	1000	Shaf 800	600	90
SCHLEICHER						
Tucker Drlg	3	dsl	350	S/B N45	600	65
SCURRY						
Britton Inds Drlg	2	dsl	1000	Nat 50CA	1000	120
D B Drlg	11	dsl	770	Shaf SOS6000	540	85
	2	dsl	675	Nat 732	540	85
	9	dsl	830	MC U34	530	75
GCO Drlg	4	dsl	1200	BDW 650M	650	100
Hondo Drlg	1	dsl	875	MC U15	700	100
McCutchen Drlg, J W	3	dsl	820	Wils Atlas Roadair	820	106
SHACKELFORD						
Bandera Drlg	5	dsl	850	MAC 300	475	75
Jones Drlg Co	51	dsl	425	S/B N4	425	60
	53	dsl	225	Houston Portable	225	30
	54	dsl	425	Beth S45	425	60
	55	dsl	450	Beth S45	425	70
SHELBY						
Gibson Drlg	1	dsl	606	Wils Mogul 42	398	50
	4	dsl	506	Wils Mogul 65	398	50
Grace France Drlg	5	el	2400	Olwl 760E	2400	170
Sawyer Drlg & Serv	1	dsl	700	S/B N7	700	110
United Drlg Div	4	dsl	1000	Sup PSD700	700	100
SMITH						
Continental Drlg	3	d-e	2600	Idco E1700	1700	180
	42	d-e	3200	Idco E2100	2100	250
	6	d-e	2600	Idco E1700	1700	180
Delta Drlg	74	dsl	1000	S-H 7000	480	90
Gibson Drlg	7	dsl	895	C-E GB350	660	85
Globe Drlg	3	dsl	800	MC U15	800	120
	5	dsl	850	Olwl 76	1000	140
	7	dsl	3000	G-D 1100	1500	200
	8	d-e	3000	G-D GD1000	1500	200
Henley Drlg	220	dsl	1200	Cbot 900	900	100
Maxwell Herring Drlg	12	dsl	1500	Wils 150A	2500	150
	17	dsl	2500	Beth 1500	2400	200
	18	dsl	3250	G-D 1100	2700	230
	19	dsl	2100	G-D 1100	2100	180
	2	dsl	1034	Beth M810	928	120
	20	dsl	1800	S/B 75A	1200	1120
	3	dsl	1000	G-D 800	1000	120
Noble Drlg	N-58	dsl	800	Nat 55	800	120
Penrod Drlg	18	dsl	2250	Nat 1625M6	2200	100
Rotary Drlg	11	dsl	850	S-H 7000	700	106
Thunderbolt Drlg	52	dsl	1700	Nat 55	1845	130
United Drlg Div	10	dsl	950	MC U34	470	65
	9	dsl	1200	Beth M58	800	125
Verna Corp	24	dsl	550	MC U15	600	100
	29	dsl	1000	MC U15	600	100
	30	dsl	550	MC U15	600	100
STARR						
Alanco Drlg	3	dsl	1425	Idco H1000	975	110
Bawden Drlg, Peter (TX)	7	dsl	1200	Nat 55	700	115
Willis Drlg	1	dsl	1000	Beth B-Line MC450	1000	120
STEPHENS						
E & H Drlg	6	dsl	600	Wils Mogul	350	65
	7	dsl	500	Nat T32	350	65
Faulk Drlg	4	dsl	450	S/B N4	450	60
Grand Drlg	1	dsl	800	Shaf SS600S	475	80
Lynx Drlg	2	dsl	500	Idco H30	360	70
Seely & Co	1	dsl	290	G-D 1500	290	15
	2	dsl	350	Fail 2500	350	25
Wes-Mor Drlg	6	g-b		MC U34		45
STERLING						
D B Drlg	8	dsl	830	Beth S55	700	100
GCO Drlg	6	dsl	820	BDW 650M	650	100
Moran Bros	58	dsl	1300	Cbot 750	750	90
Robinson Drlg of Texas	5	dsl	750	MC U15	900	95
Tucker Drlg	2	dsl	750	C-E GB500	750	100
Wes-Tex Drlg	1	dsl	650	Nat 50A	650	100
	3	dsl	700	Nat 50A	700	100
STONEWALL						
Bandera Drlg	4	dsl	750	BDW 450T	540	85
GCO Drlg	2	dsl	640	BDW 450	450	75
Mesa Drlg	4	dsl	675	SOS 6000	550	80
Safari Drlg	8	dsl		Detroit Diesel 8V		80
Wes-Mor Drlg	4	dsl	400	MC U15		75
SUTTON						
D B Drlg	22	dsl	410	MC U34	368	70
Delta Drlg	73	dsl	500	S-H 7000	440	90
Mellon Drlg	4	dsl	750	Beth S50	375	70
Penrod Drlg	25	dsl	2600	C-E C2	1950	250
TMBR Drlg	11	gas	500	MC U15	500	100
	15	gas	700	MC U15	500	105
	8	dsl	700	Nat 50CA	600	105
TAYLOR						
Bandera Drlg	9	dsl	700	MAC 300	475	75
Douglas Drlg	1	dsl	700	Nat 50CA	700	100
Hack Drlg	2	dsl	350	S/B N4	350	55
McBay Oil & Gas	1	dsl	3406	Wils Super 38	3300	80
	2	dsl	3406	Beth S50	3408	80
Safari Drlg	1	dsl	640	MC U15	640	100
	7	dsl	480	C-E G42	560	70
Sojourner Drlg	10	dsl		MC U15	550	70
	7	dsl	350	MC U15	7500	75
Tri-J Drlg	1	dsl	325	Wich R5	250	30
	3	dsl	500	May 3000	250	30
	5	dsl	375	Wich R6A	350	50

TEXAS (Cont'd)

• Contractor	Rig No. •	Type Power •	Total HP All Main Mud Pumps •	Drawworks Make And Model •	Total HP Available to Drawworks •	Rated Depth With 4½-in. Pipe, 100 ft. •
TERRELL						
Cactus Drlg Co	1					
TERRY						
Cactus Drlg Co	9					
Cactus Drlg Corp	9	dsl	1200	S/B N75	1200	135
Hondo Drlg	4	dsl	1650	S/B N75	1100	140
Norton Drlg	7	dsl	450	Wils 65	650	85
Sharp Drlg	38	dsl	790	Beth M58	988	120
TMBR Drlg	6	dsl	700	Nat 75CA	750	120
Willbros Drlg	1	dsl	1200	Olwl 76	1200	140
THROCKMORTON						
Ashtola Drlg	1	dsl	800	MC U15	600	75
Burns L D Drlg	3	dsl	800	Wils 75	780	105
E & H Drlg	4	g-l	550	MC U15	550	75
TITUS						
Hinton Drlg, W B	3	dsl	1700	Nat 80B	1650	150
TOM GREEN						
Lange Drlg, LeRoy	1	dsl	225	Jaswell	525	35
Lynx Drlg	4	dsl	750	TSM-6000	540	90
M N D Drlg-Northern	61	dsl	700	MC 38A	600	115
Mellon Drlg	3	dsl	750	Beth S60	375	82
Stahico Drlg	2	dsl	510	I-R T5	485	50
Transcontinental Drlg-San Angelo	30	dsl	750	S/B N55	750	100
	34	dsl	674	Beth S55	650	80
Tucker Drlg	1	dsl	750	S/B N55	750	100
	10	dsl	750	S/B N45	750	75
	12	dsl	750	Nat 50A	750	100
	4	dsl	214	MC U15	450	75
	5	dsl	750	C-E GE500	750	100
	6	dsl	750	S/B N75	750	120
	7	dsl	375	Beth 560	600	70
	9	dsl	750	Nat	750	100
TMBR Drlg	32	dsl	1200	Nat T16		
Wes-Tex Drlg	8	dsl	335		500	80
TRAVIS						
Howell Drlg	1	dsl	1000	Cbot 900	900	110
TRINITY						
Wilson Bros Drlg	12	dsl	1850	Nat 110	1850	160
TYLER						
Cliffs Drlg	41	dsl	2800	Nat 1320	2475	250
Diamond M Land Drlg	175	dsl	2000	MC 1220	2000	250
UPSHUR						
Delta Drlg	15	dsl	1800	C-E D3 Type III	1040	135
FWA Drlg	27	dsl	2000	G-D 800M	1580	155
	33	dsl	1750	G-D 700M	1040	120
Nowotny & Conley Drlg	1	dsl	2000	OIME SL-1000	1200	150
Rainbow Drlg	5	dsl	2000	Cbot 1200	1200	150
Resource Drlg	RD-31	dsl	1560	Nat 80B	1835	140
Woolf & Magee	2	dsl	1550	G-D 700	1000	135
UPTON						
BJM Drlg & Expl	3	dsl	1200	Nat 150AC	1000	120
FWA Drlg	11	dsl	1065	Wils Giant	900	110
	3	dsl	1250	Wils Super Giant	1040	130
Holliday Drlg	1	dsl	1000	G-D 700	1000	120
Hurt & Assoc, Clint	10	dsl	1200	Wils 75	900	110
Resource Drlg	RD-25	dsl	1560	Nat 80B	1835	140
VAL VERDE						
Delta Drlg	4	dsl	2150	Nat 100	1580	160
Tri-Service Drlg	11	d-e	3000	MC 1220ED	3000	200
VAN ZANDT						
Hinton Drlg, W B	8	dsl	1300	S-H 7000	400	100
VICTORIA						
B D K Drlg	1	dsl	1000	Wils Giant	580	85
	10	dsl	1000	S/B N46	900	100
	6	dsl	1000	S/B 4610	950	100
	8	dsl	1000	S/B 4610	750	100
Bilbo Drlg	1	dsl	500	S/B N4A	500	80/ 4"
	3	dsl	900	Crdw KB250	600	80/ 4"
	4	dsl	800	Cbot 900	900	115
Burro Drlg	1	dsl	500	Wils Mogul 42	500	90
Continental Drlg	14	d-e	2000	Idco ED1200	1200	160
	2	d-e	2800	Idco E1700	1700	160
Corpus Christi Drlg	6	dsl	300	S/B 550	450	80
Houtech Drlg	801	dsl	1500	Seaco 1400M	1300	150
	803	dsl	1600	G-D 700	1200	150
	804	dsl	1600	G-D 700	1200	150
Padre Drlg	4	dsl	500	S/B H4210	400	75
VICTORIA (Cont'd)						
Southland Drlg	11	dsl	2300	MC A1500	2300	240
	12	dsl	2300	MC 1500A	2300	240
	14	dsl	2225	C-E A1500	2500	240
	16	dsl	1925	S/B N12A	2200	170
	5	dsl	700	S/B N55	700	100
	9	dsl	800	S/B N45	600	75
WALKER						
Cliffs Drlg	40	d-e	2600	Nat 1320UE	3025	250
WARD						
BJM Drlg & Expl	1	dsl	1200	MC U15	1000	120
Dual Drlg	37	dsl	875	Olwl 500	700	100
Hillin Drlg	3	dsl	500	BDW 450T	575	75
	8	dsl	500	Wils 42 Mogul	400	60
Moran Bros	39	d-e	2600	C-E C1 Type II	1500	200
Sharp Drlg	67	dsl	2331	MC U914C	2742	235
T O T Drlg	2	dsl	1155	OIME SL5	1155	150
TMBR Drlg	12	dsl	700	Nat 50	600	105
	24	dsl	1100	G-D 700	1100	140
WASHINGTON						
Durkee Drlg	1	d-e	2000	Sup 1000UE	1000	160
Ladrido Drlg	3	dsl	1350	MC U15	1050	120
Spartan Drlg	9	d-e	1000	Sup 1000UE	1000	160
WEBB						
Alanco Drlg	2	dsl	1000	Idco H40	600	100
Atco Drlg Southern	19	dsl	1500	Olwl 66	700	105
	50	dsl	1850	Nat 100HD	750	150
	57	dsl	1600	Nat 610UE	800	120
Bearden Drlg, Jack E	3	dsl	1200	Wils Mogul Super 42	750	9[illegible]
	5	dsl	1200	Wils 75	900	[illegible]5
Cactus Drlg Co	61	dsl	520	Nat T20	460	[illegible]0
Harkins & Co	7	dsl	1650	Nat 110	1650	160/ 5"
PRC Drlg	6	dsl	1790	S/B N75A	1040	130
Rio Colorado Drlg	145	dsl	2000	Nat 110	165[illegible]	180
Texas Drlg	10	dsl	2000	Cbot 1200	1700	150
	2	dsl	1700	S/B N7	1200	125
	3	dsl	1700	Nat 50A	1455	125
	5	dsl	1700	Cbot 1200	1200	170
	6	dsl	1200	Cbot 900	950	110
	7	dsl	1700	Cbot 900	900	115
	8	dsl	2000	Cbot 1200	1200	150
	9	dsl	1800	C-E D2	1200	140
Williams Drlg of South TX	3	dsl	800	Idco BIR8085	950	115/ 4"
WHARTON						
Bawden Drlg, Peter (TX)	2	d-e	2000	Nat 1320UE	2000	220
Dixilyn-Field Drlg	11	dsl	2600	Nat 110M	2331	180
FWA Drlg	29	dsl	2600	Nat 110	2400	200
WHEELER						
Baker & Taylor Drlg	2	dsl	1400	MC U20	1400	200
	3	dsl	1200	MC U20	1200	180
Cliffs Drlg	27	dsl	2600	Nat 1320	2475	250
Cothrum Drlg	10	dsl	1500	G-D 1500	2250	240
Helmerich & Payne Intl Drlg	47	dsl	2475	Olwl M2000	2730	260
	80	d-e	2200	Nat 110UE	1500	200
	82	d-e	2800	Olwl E2000	2000	260
Loffland Bros	222	d-e	3300	MC U1220B	2200	280
Moran Bros	34	dsl	1700	Olwl 700	1000	150
Moran Drlg, E W	28	d-e	3200	G-D 3000E	3000	400
	29	dsl	1400	G-D 700	800	130
Noble Drlg	N-115	dsl	2130	Nat 110	2130	200
	OW-22	d-e	3300	Olwl E2000	3300	250
Parker Drlg	162	dsl	2200	OIME SL1500P	2200	220
Penrod Drlg	116	dsl	1300	Nat 1320M	2000	250
	117	dsl	1300	Nat 1625M	2000	250
Resource Drlg	8	dsl	2330	Nat 110	2740	180
Service Drlg (TX)	12	dsl	1000	C-E D2	800	120
Sharp Drlg	66	d-e	2331	Olwl M2000E	2742	300
Unit Drlg & Expl	18	dsl	1000	G-D 700	1300	180
Viersen & Cochran Drlg	16	dsl	3200	Nat 1320UE	3417	250
WICHITA						
Moran Drlg, E W	12	dsl	1200	Beth S80	600	100
	20	dsl	1200	S-H 7000	450	95
WILBARGER						
Luke Grace Drlg	1	g-b	500	MC U15	750	105
	2	dsl	500	MC U15	750	105
Megargel Drlg	2	dsl	750	MC U15	750	70
Theiss Drlg	1	dsl	900	S/B H46	900	100
WILLACY						
Nickles Drlg	77	d-e	1800	C-E C1II	1530	180
Willis Drlg	5	dsl	800	MC U15	800	100
WILSON						
Magee-Poole Drlg	7	dsl	1130	Cbot 750	808	90/ 4"
Padre Drlg	6	dsl	500	S/B H4210	400	75
South Texas Drlg	5	dsl	500	S/B N45	500	80
WINKLER						
Cactus Drlg Co	56	dsl	520	Beth S45E	454	65
	66	dsl	520	S/B N4	454	60
Santa Fe Drlg	10	d-e	2000	C-E Electrohoist II	1800	220
WISE						
Lin-Mour Drlg	31	gas	700	Wils Giant	700	90
M N D Drlg-Northern	1359	dsl	450	C-E-350	450	60
	5001363	dsl	800	MC U15	800	95
	5001364	dsl	800	MC U15	800	95
	51	dsl	660	Nat 50	550	70
	52	dsl	550	MC U15	550	70
	53	dsl	800	MC U15	800	90
	54	dsl	600	MC U15	600	90
	55	dsl	600	MC U15	600	90
	60	dsl	800	MC U15	800	95
	62	dsl	600	MC U15	600	90
	65	dsl	700	MC U36A	700	120
	66	dsl	700	MC U36A	700	120
Megargel Drlg	16	dsl	500	Shaf S6000	500	80
WOOD						
Delta Drlg	21	dsl	2300	G-D 1100	2592	170
Gibson Drlg	8	dsl	529	Wils 65	380	50
Globe Drlg	6	dsl	700	C-E C50	700	100
Helmerich & Payne Intl Drlg	40	dsl	1650	Olwl 860	1615	200
Justiss Oil	28	dsl	700	Olwl 96	1000	150
Thunderbolt Drlg	20	dsl	1150	Wils Mogul	476	80
YOAKUM						
Chico Drlg	4	dsl	1000	Unit U15A	878	110
	6	dsl	1300	C-E D2	1224	140
Hillin Drlg	9	dsl	600	Idco H40	600	80
Hondo Drlg	3	dsl	1100	Beth M58C	800	130
Kenai Drlg of Texas	28	dsl	1200	S/B N7	800	120
Norton Drlg	2	dsl	450	Wils Mogul 42	650	70
Quarles Drlg	15	dsl	2000	RMI 1000	1000	150
Sitton Drlg	7	dsl	450	Wils 75P	900	115
Tri-Service Drlg	3	g-b	750	Olwl 76	750	130
Verna Corp	1	dsl	600	S/B N55	800	125
	2	dsl	600	S/B N55	800	125
YOUNG						
Cothrum Drlg	8					
E & H Drlg	2	dsl	400	MC U34	325	60
Franklin Drlg	1	dsl	300	G-D 1500	300	15
	2	dsl	400	G-D	400	25
Lin-Mour Drlg	4	gas	400	Wils Mogul	310	50
Oilwell Drlg	6	dsl	476	Wils 550		55
	7	dsl	476	S-H 5000	476	70
	8	dsl	800	SOS 6000S	650	80
	9	dsl	800	Crdw L	500	40
Wes-Mor Drlg	10	dsl		MC U15		75
	2	dsl		MC U34		60
	7	dsl	680	MC U34	680	75
	8	g-b		MC U15		65
ZAPATA						
Buzzini Drlg	10	dsl	3600	Olwl M2000	2400	200
Delta Drlg	17	d-e	2300	C-E C1 Type II	2592	160
	95	d-e	2900	C-E CI Type II	3456	200
Harkins & Co	6	dsl	1260	S/B N75A	1260	125
	8	dsl	1800	C-E C1 Type III	1800	180/ 5"
Helmerich & Payne Intl Drlg	37	dsl	2835	Olwl M2000	2835	220
Kelley & Kerr Drlg	KK-1	d-e	2000	OIME SD7	1500	180
Penrod Drlg	119	dsl	1600	Nat 1625M	3000	300
	22	dsl	2600	Nat 1320N	1950	250
PRC Drlg	7	dsl	1700	G-D 800M	1040	180
Willis Drlg	4	dsl	1200	S/B N85	1200	140
ZAVALA						
Sundown Drlg	1	dsl	400	C-E 160GB	400	55
	7	dsl	475	C-E GB250	475	75

UTAH

• Contractor	Rig No. •	Type Power •	Total HP All Main Mud Pumps •	Drawworks Make And Model •	Total HP Available to Drawworks •	Rated Depth With 4½-in. Pipe, 100 ft. •
UNDESIGNATED						
Westburne Drlg Canada	65	dsl	520	Nat T45	460	85
CARBON						
Grace-Bomac Drlg	91	dsl	1650	Nat 80B	1650	180
DAGGETT						
All Western Drlg	2	gas	800	MC U15	700	100

UTAH (Cont'd)

• Contractor	Rig No. •	Type Power •	Total HP All Main Mud Pumps •	Drawworks Make And Model •	Total HP Available to Drawworks •	Rated Depth With 4½-in. Pipe, 100 ft. •
DUCHESNE						
Bawden Drlg Ltd, Peter	21	d-e	2000	C-E C1	1500	180
Coleman Drlg	1	dsl	900	Idco H44	636	80
Olsen Drlg	2	dsl	1250	Nat C350A	1000	100
	5	dsl	6015	Crdw 1350	500	60
Parker Drlg	177	dsl	1400	OIME SL1500	1400	165
Rio Grande Drlg	2	dsl	1000	Nat 80B	1500	160
Transcontinental Drlg-Denver	57	dsl	1100	G-D 800	1300	130
TWT Expl	51	dsl				55
	55	dsl				80
	56	dsl				120
	57	dsl				170
Viersen & Cochran Drlg	13	dsl	1850	Nat 80B	1500	180
	7	dsl	1700	MC U712A	1554	180
	8	dsl	1450	Nat 80B	1554	180
W E S Corp	58	dsl				140
	7		1000	Wils Giant	1000	120
EMERY						
Nicor Drlg	46	d-e	2000	C-E C1E	1000	210
GARFIELD						
Kenting Drlg	20-E	d-e	2400	MC U914 EC	2000	200
Loffland Bros	58	d-e	1600	Nat 80B	2000	150
GRAND						
Nicor Drlg	57	dsl	925	Nat T45	550	106
Parker Drlg	112	dsl	3000	Idco 3000	3000	300
Veco Drlg	2	dsl	425	May 5000	500	70
	3	dsl	850	MC U36A	700	90
JUAB						
Penrod Drlg	102	dsl	1600	Nat 610M	984	180
MILLARD						
Montgomery Drlg	31	dsl	2000	Nat 110UE	2700	180
MORGAN						
Anderson-Myers Drlg	17	dsl	2300	Nat 110	2300	220
Exeter Drlg Northern	43	dsl	2250	C-E C Type III	2250	200
RICH						
Brinkerhoff-Signal	2	dsl	875	MC U36A	600	90
Grace-Bomac Drlg	44	dsl	1650	G-D 800	1650	160
Manning, R L	30	d-e	1600	C-E D3	1000	165
SAN JUAN						
Anderson-Myers Drlg	10	dsl	670	Nat T32	800	85
	18	dsl	600	Nat T45	800	100
Arapahoe Drlg	2	g-b	300	Nat T32	320	80
	4	g-b	700	Nat 50A	500	120
Bayless Drlg	1	dsl	1500	Idco H1000	950	100
Brinkerhoff-Signal	32	dsl	1000	C-E GC350	465	80
Coleman Drlg	3	dsl	900	Idco H44CSC	636	80
	4	dsl	1300	S/B MODN46	930	100
Four Corners Drlg	8	dsl	1500	Crdw KB500	750	80
SEVIER						
Grace-Bomac Drlg	56	dsl	2400	G-D 1100M	2400	200
Parker Drlg	118	d-e	1650	Nat 80B	1650	200
SUMMIT						
Brinkerhoff-Signal	83	d-e	2000	C-E D3	2000	180
	88	dsl	4000	Nat 110UE	2000	200
Dixilyn-Field Drlg	38	dsl	2000	Nat 110UE	2000	180
Exeter Drlg Northern	56	dsl	[illegible]	-D 1100	1650	200
Harpel Drlg	6	d-e	20[illegible]	C-E D2	1000	140
Loffland Bros	188	dsl	21[illegible]	MC U914C	2400	200
Manning, R L	31	d-e	1350	C-E D2	700	110
	32	d-e	1600	C-E D3	1000	165
	33	d-e	1650	C-E C1	1500	195/ 5"
	35	d-e	2400	C-E C1	1500	200/ 5"
Noble Drlg	N-116	dsl	3000	Nat 110UE	3000	200
	OW-862	dsl	2400	Olwl 860	2400	180
Norton Drlg	9	d-e	1350	G-D 110E	1500	200
Parker Drlg	169	dsl	1650	OIME SL1000P	1650	200
	170	dsl	1650	OIME SL1500P	1650	200
	171	dsl	1650	OIME 1500P	1650	200
	173	dsl	1650	OIME 1500P	1650	200
	183	dsl	1650	OIME 1500P	1650	200
Transcontinental Drlg-Denver	41	dsl	2450	G-D 1100	2925	180
Viersen & Cochran Drlg	11	dsl	2600	Nat 110	2400	200
UINTAH						
All Western Drlg	1	dsl	1200	Schramm		15
	3	dsl	1050	MC U15	840	100
	4	dsl	1500	Sup 700	750	100
Brinkerhoff-Signal	85	dsl	550	Nat 370	800	90
Loffland Bros	236	dsl	1200	MC U15	1000	100

UTAH (Cont'd)

• Contractor	Rig No. •	Type Power •	Total HP All Main Mud Pumps •	Drawworks Make And Model •	Total HP Available to Drawworks •	Rated Depth With 4½-in. Pipe, 100 ft. •
UINTAH (Cont'd)						
Manning, R L	10	dsl	720	Olwl 660	720	100
	23	dsl	800	S/B N45	740	75
	9	dsl	650	C-E GA500	650	85
Nicor Drlg	66	dsl	2000	MC U712A	1200	160
Shelby Drlg	53-E	d-e	1000	Nat 370ESCR	700	100
TWT Expl	58	dsl				140
	59	dsl				120
W E S Corp	51	dsl				50
	59	dsl				120
Westburne Drlg	56	dsl	310	Nat T32	275	70
	65	dsl	870	Nat T45	400	85
UTAH						
Loffland Bros	221	dsl	2880	MC U1220AE	3200	250
WASATCH						
Penrod Drlg	20	dsl	2600	Nat 1320M	1950	250

VIRGINIA

• Contractor	Rig No. •	Type Power •	Total HP All Main Mud Pumps •	Drawworks Make And Model •	Total HP Available to Drawworks •	Rated Depth With 4½-in. Pipe, 100 ft. •
LEE						
Union Drlg	4	dsl	1200	S-H 6000	340	70

WASHINGTON

• Contractor	Rig No. •	Type Power •	Total HP All Main Mud Pumps •	Drawworks Make And Model •	Total HP Available to Drawworks •	Rated Depth With 4½-in. Pipe, 100 ft. •
GRANT						
Brinkerhoff-Signal	53	d-e	2325	Nat 110	2325	200
KING						
Taylor Drlg	5	dsl	330	MC U34	375	40

WEST VIRGINIA

• Contractor	Rig No. •	Type Power •	Total HP All Main Mud Pumps •	Drawworks Make And Model •	Total HP Available to Drawworks •	Rated Depth With 4½-in. Pipe, 100 ft. •
BARBOUR						
Union Drlg	8	dsl	1200	Idco BIRH37	425	65
BOONE						
Ray Resources	4	dsl	450	Idco BIR5525	600	60
CABELL						
FWA Drlg	22	dsl	275	Wils Super 38	300	45
CALHOUN						
Hurt & Assoc, Clint	8	dsl	350	Kremco K600	500	75
FAYETTE						
Smith Drlg	10	dsl	3550	Chal M320	360	50
	12	dsl	450	Chal M320	400	50
HAMPSHIRE						
Union Drlg	9	dsl	1200	Cbot Exp III	425	90
JACKSON						
Hurt & Assoc, Clint	4	dsl	350	Wils Super 38	350	50
	7	dsl	350	Kremco K600	500	75
Smith Petr, Carl E	4	dsl		C-E T97	500	100
	5	dsl		MC NDT335		45
	6	dsl		Idco BIR5525	500	75
	7	dsl		Idco BIR5525	500	75
KANAWHA						
Hurt & Assoc, Clint	2	dsl	350	Wils Super 38	350	50
Ray Resources	6	dsl	450	Idco DIR7015	700	80
LEWIS						
Union Drlg	2	dsl	1200	Idco BIR5525	425	60
McDOWELL						
Ray Resources	9	dsl	450	Idco H35	600	65
MASON						
Delta Drlg	84	dsl	1800	C-E D3 Type III	1580	160
MINGO						
Hurt & Assoc, Clint	5	dsl	350	Wils Super 38	350	50
NICHOLAS						
Union Drlg	3	dsl	1200	Idco 650	425	90
PLEASANTS						
FWA Drlg	23	dsl	275	Wils Super 38	300	60
PUTNAM						
FWA Drlg	15	dsl	275	Wils Super 38	300	45
RALEIGH						
Ray Resources	3	dsl	450	Idco BIR5525	600	60

WEST VIRGINIA (Cont'd)

• Contractor	Rig No. •	Type Power •	Total HP All Main Mud Pumps •	Drawworks Make And Model •	Total HP Available to Drawworks •	Rated Depth With 4½-in. Pipe, 100 ft. •
RITCHIE						
Hurt & Assoc, Clint	1	dsl	350	Wils Mogul 42	500	75
Union Drlg	6	dsl	1200	S/B DH4210	425	80
ROANE						
FWA Drlg	13	dsl	275	Wils Giant	500	45
UPSHUR						
Hurt & Assoc, Clint	3	dsl	350	Wils Super 38	350	50
Union Drlg	1	dsl	1200	Crdw KM250	425	60
	11	dsl	1200	S-H 5000	350	50
	13	dsl	1200	Idco BIR5525	425	60
	5	dsl	1200	Crdw 350	385	60
WIRT						
Ray Resources	14	dsl		Nat T20	600	65
	7	dsl	450	Crdw KB500	700	80
WOOD						
Hurt & Assoc, Clint	8	dsl	350	Wils Mogul 42	500	70

WYOMING

• Contractor	Rig No. •	Type Power •	Total HP All Main Mud Pumps •	Drawworks Make And Model •	Total HP Available to Drawworks •	Rated Depth With 4½-in. Pipe, 100 ft. •
UNDESIGNATED						
Baltic Drlg	1	dsl	870	Sup 700	600	105
Kenai Drlg West Coast	1	dsl	2450	C-E A800	2450	150
	12	dsl	850	Nat 50A	950	100
	26	dsl	1000	Wils Atlas	1150	140
	27	dsl	1000	Nat CA75	1150	140
	3	dsl	600	Olwl 52T	700	95
	33	dsl	800	Wils Giant	1000	120
	35	dsl	800	Nat CA75	1150	140
Westburne Drlg Canada	69	dsl	1950	Nat 1320M	1950	200
ALBANY						
Atco Drlg	20	dsl	800	C-E GB500	800	100
Barnhart Drlg	4	dsl	350	G-D 15W	350	15
BIG HORN						
Anderson-Myers Drlg	4	dsl	1200	C-E GA500	1200	110
Barnhart Drlg	3	dsl	600	Idco H35	350	60
Exeter Drlg Northern	19	dsl	700	G-D 800	1100	140
Nicor Drlg	60	dsl	1700	Nat 55M	700	150
CAMPBELL						
Apollo Drlg	23	dsl	1100	Nat 50A	810	90
Atco Drlg	27	dsl	720	Beth C50	720	85
	54	d-e	1800	Nat 610UE	1800	120
	8	dsl	1230	C-E A550	1230	120
Brinkerhoff-Signal	20	dsl	500	Nat 50A	500	100
	21	dsl	1040	C-E GC500	1040	115
	82	dsl	1500	G-D 700M	800	125
Burris Drlg	117	dsl	800	MAC 400	500	105
	118	dsl	850	MAC 400	500	105
Cyclone Drlg	1	dsl	800	MC U15	800	90
	2	dsl	800	Beth M58	800	120
	3	dsl	1250	MC U30	1250	150
	4	dsl	800	MC U15	800	90
	5	dsl	800	Beth M58	800	120
	6	dsl	800	Nat 50A	800	100
Exeter Drlg Northern	10	dsl	500	S/B N55	750	105
	20	dsl	500	C-E GC500	750	110
	3	dsl	550	Nat 50A	750	95
	30	dsl	750	C-E D2	1100	125
	35	dsl	500	MC U15	750	95
	36	dsl	450	Beth M58	750	110
	37	dsl	500	G-D 700	1100	125
	38	dsl	500	MC U15	750	95
	7	dsl	700	S/B N75	1000	125
	9	dsl	750	S/B N75	1100	125
Grace-Bomac Drlg	28	dsl	1125	C-E GA500	800	100
Transcontinental Drlg-Denver	55	dsl	810	Olwl 76	980	120
CARBON						
Anderson-Myers Drlg	7	dsl	1200	Nat 55	1400	130
Brinkerhoff-Signal	3	dsl	1000	Nat 55	1000	120
Manning, R L	22	dsl	1000	C-E A550	1300	110
Rio Grande Drlg	26	dsl	750	S/B N75	1030	145
Simmons Drlg	48	dsl	350	Hycalog HH6000	350	68
CASPER						
Signal Oilfield Serv	1	dsl	550	Cbot 750	700	85
	27	dsl	1025	Cbot 800	750	90
	28	dsl	735	Cbot 800	750	90

WYOMING (Cont'd)

• Contractor	Rig No. •	Type Power •	Total HP All Main Mud Pumps •	Drawworks Make And Model •	Total HP Available to Drawworks •	Rated Depth With 4½-in. Pipe, 100 ft. •
CONVERSE						
Anderson-Myers Drlg	9	dsl	1200	Nat 55	1200	120
Brinkerhoff-Signal	14	dsl	1000	Nat 55	1000	125
Energy Operating Corp	3	dsl	2000	Nat 80B	1800	180
Exeter Drlg Northern	18	dsl	500	Nat 50A	750	95
Helmerich & Payne Intl Drlg	38	dsl	1230	Nat 80	1385	160
Loffland Bros	163	dsl	1280	Nat 80B	1500	160
	234	dsl	1400	MC U40	1600	130
Manning, R L	6	dsl	1290	C-E GB800	1290	140
Transcontinental Drlg-Denver	38	dsl	1750	G-D GD800	1836	150
	40	dsl	1200	Olwl 76	1224	125
Westburne Drlg	60	dsl	750	Nat 50A	850	110
CROOK						
Exeter Drlg Northern	21	dsl	550	MC U15	720	95
	34	dsl	500	MC U15	750	95
	39	dsl	500	MC U15	750	95
Gallagher Drlg	6	dsl	520	Crdw O	970	120
True Drlg	15	g-l	1300	Nat 50A	1000	115
FREMONT						
Atco Drlg	12	dsl	1845	Nat 80B	1845	150
	2	dsl	2000	Nat 80B	1000	150
Brinkerhoff-Signal	69	dsl	1000	Nat 110	1500	180
	72	dsl	2000	Nat 1320UE	2000	250
Dixilyn-Field Drlg	38	dsl	2000	Nat 110UE	2000	180
	39	dsl	2600	Nat 110UE		180
	40	dsl	1600	Nat C205		150
	41	dsl	3200	Nat 1320UE	2000	200
Grace-Bomac Drlg	24	dsl	2400	Nat 110M	2400	200
Loffland Bros	223	dsl	1280	MC U15	1000	100
Manning, R L	12	dsl	700	Olwl 63	550	110
	25	dsl	1000	S/B N75	1300	115
Parker Drlg	124	dsl	1650	Olwl 2000E	1650	250
Quarles Drlg	24	dsl	2700	G-D 1500E	2000	300
Shelby Drlg	12	d-e	1600	G-D 1100ESCR	2000	200
Stewart Bros Drlg	45	dsl	324	Fail 2500	324	30
	51	dsl	324	Fail 2500	324	30
Trigg Drlg	6	d-e	2400	MC U914E	2400	250
Westburne Drlg	69	dsl	1400	Nat 1320M	1600	200
	72	dsl	720	Nat T32	380	75
HART						
Roden Drlg, J B	1	dsl	836	C-E GB350	840	85
HOT SPRINGS						
Anderson-Myers Drlg	1	dsl	680	Nat T32	450	70
	2	dsl	1200	Nat 55	1200	120
Barnhart Drlg	2	dsl	600	Nat T20	350	50
JOHNSON						
Anderson-Myers Drlg	6	dsl	1800	C-E GB800	1800	150
Brinkerhoff-Signal	57	dsl	1560	Nat N80B	1560	160
Burris Drlg	114	dsl	1500	G-D 1100	1500	200
Enopco	3	dsl	1620	Nat 80B	1620	175
Exeter Drlg Northern	8	dsl	500	S/B N7	750	95
Harpel Drlg	4		1400	S/B N46	900	120
Loffland Bros	40	dsl	1880	S/B N95	2000	160
Manning, R L	34	d-e	1600	C-E D3	1000	190
True Drlg	25	dsl	2100	MC U914C	2100	220
LINCOLN						
Brinkerhoff-Signal	12	dsl	1000	Nat 55	1000	120
Exeter Drlg Northern	29	dsl	1200	G-D 800	1125	150
LINCOLN (Cont'd)						
Forwest	6	d-e	2600	Nat 110UE	2000	200
Helmerich & Payne Intl Drlg	81	d-e	2200	Nat 110UE	1500	200
Loffland Bros	106	dsl	2160	S/B N12A	2400	250
	119	d-e	4000	C-E CE3000 Type II	3300	350
	184	dsl	2160	MC U712A	2400	150
	60	d-e	1800	MC U712A	2000	170
	89	d-e	2100	MC U1220EB	2400	250
Manning, R L	29	dsl	800	C-E GB500	934	90
Norton Drlg	10	dsl	750	G-D 700	1070	150
Parker Drlg	163	dsl	1650	OIME SL1500	1650	200
	92	dsl	1650	Nat 100M	1650	160
Rio Grande Drlg	10	d-e	1300	Nat 1320UE	1195	250
True Drlg	16	g-l	1300	Nat 50A	1000	110
	24	dsl	1400	MC U914C	2400	220
	9	dsl	1200	MC U40	1200	150
NATRONA						
Burris Drlg	112	dsl	1500	G-D 1100	1500	200
Dixilyn-Field Drlg	31	d-e	2300	Nat 1320UE	5000	250
	32	dsl	2300	Nat 130	2331	250
	34	d-e	3200	Nat 1320UE	2500	250
Grace-Bomac Drlg	43	dsl	1100	G-D 700M	1100	125
Loffland Bros	70	d-e	3300	MC U1220EB	2200	250
	97	d-e	3300	MC U1220ER	3300	300
Murco Drlg	58	d-e		Sup 4000E		540
Parker Drlg	118	dsl	1650	Nat 100M	1650	200
Transcontinental Drlg-Denver	53	dsl	810	Nat 50A	980	90
West Wind Drlg	55					
Westburne Drlg	70	dsl	700	Nat 50A	700	100
NIOBRARA						
Exeter Drlg Northern	17	dsl	500	Nat 50A	750	95
Harpel Drlg	5	dsl	1250	S/B N42	700	85
PARK						
Anderson-Myers Drlg	11	dsl	1200	Nat 55	1200	130
Atco Drlg	25	dsl	700	Idco H525	700	95
Barnhart Drlg	1	dsl	700	Idco H525	575	75
Manning, R L	15	dsl	700	Nat 55	700	110
	16	g-b	640	Nat T32	458	65
	17	g-b	770	C-E GC500	910	110
	28	g-b	800	C-E GB350	506	75
	8	dsl	850	C-E GA500	850	90
Penrod Drlg	115	dsl	1600	Nat 1625ME	3000	300
Simmons Drlg	36	dsl	350	Hycalog HH600P	350	68
	41	dsl	350	Hycalog HH6000	350	68
Wyoming Well Serv	21	dsl	500	Idco H35	318	50
	24	dsl	300	Crdw 200A	318	45
	30	dsl	300	Crdw 200A	318	45
SHERIDAN						
Apollo Drlg	6	dsl	1020	Olwl 76	1020	120
SUBLETTE						
Brinkerhoff-Signal	66	dsl	1300	G-D 1100	1500	180
Challenger Drlg	25	dsl	300	Nat T20	600	50
Exeter Drlg Northern	28	dsl	1200	G-D 800	1275	150
	31	dsl	1000	G-D 800	1650	150
Loffland Bros	325	dsl	2160	G-D 2100	2400	250
Manning, R L	26	g-b	1155	C-E GB800	1365	140
Roden Drlg, J B	3	dsl	1575	OIME 1500SL	1575	190
	7	dsl	350	BDW 450T	520	80
True Drlg	14	dsl	1200	Nat 50A	1200	120
Viersen & Cochran Drlg	9	dsl	2150	Nat 110	2400	200
SWEETWATER						
Dixilyn-Field Drlg	33	d-e	2000	Olwl 940E	3000	200
Exeter Drlg Northern	24	dsl	1000	G-D 800	1100	150
Manning, R L	20	dsl	1050	C-E J1000	1290	140
	7	g-b	750	C-E G500	750	85
Montgomery Drlg	32	d-e	2700	Nat 110UE	2000	180
Norton Drlg	6	dsl	750	Wils 75	900	130
Penrod Drlg	23	dsl	2600	Nat	1950	250
Rio Grande Drlg	28	dsl	1000	S/B N95	2300	180
Roden Drlg, J B	6	dsl	750	Nat CA75	750	130
Sabre Drlg	2	dsl	671	Wils Mogul 42	671	50
Shelby Drlg	51-E	d-e	1000	Idco 725ESCR	750	110
TETON						
Exeter Drlg Northern	11	dsl	700	G-D 700	1000	125
Loffland Bros	30	d-e	2160	MC 914EC	2200	200
Montgomery Drlg	44	dsl	2000	Olwl 96	1000	200
UINTA						
Anderson-Myers Drlg	12	dsl	1500	OIME 1500	1500	170
	14	dsl	1800	S/B N75A	1800	140
Apollo Drlg	16	dsl	1155	Nat 80B	1220	125
Brinkerhoff-Signal	26	dsl	1170	Nat 55	1170	105
	40	dsl	2400	Nat 130UE	3000	250
	6	dsl	1500	G-D 1100	1500	180
	7	dsl	1500	Nat 80B	1500	150
	73	dsl	1500	Nat 80B	1500	150
	86	dsl	1000	Nat 80B	1500	160
Burris Drlg	111	dsl	1500	G-D 1100	1500	200
Challenger Drlg	27	dsl	300	Nat T12	500	45
Exeter Drlg Northern	41	dsl	1000	G-D 700	1100	125
Forwest	1	d-e	2600	Idco E2100	1800	220
	2	d-e	2600	Idco E2100	1800	220
Grace-Bomac Drlg	29	dsl	2400	Nat 110M	2400	200
	90	d-e	2400	Nat 110UE	2000	200
Loffland Bros	214	dsl	1880	MC U40	1800	130
	8	dsl	2100	MC U914C	2400	200
Lord Drlg	1	dsl	2200	Olwl M860	1650	180
	2	dsl	2200	Olwl M860	1650	180
	3	dsl	2200	Olwl M860	1650	180
Manning, R L	14	dsl	1700	Nat 110	1500	180/ 5"
	21	dsl	1095	Nat 80B	1365	150
Montgomery Drlg	5	d-e	2700	Nat 1320UE	3645	250
Noble Drlg	E1101	dsl	2130	C-E A1100	2130	180
	132	d-e	3300	Nat 1320UE	3300	250
Parker Drlg	117	gas	2000	Nat 110	2000	220
	148	dsl	1000	OIME 750	1000	130
Pruet-Ram-Co	4	dsl	2000	C-E D3	2000	180
Rio Grande Drlg	27	dsl	750	S/B N75	1030	145
	3	dsl	1300	Nat 1320M	2300	250
	5	dsl	1300	Nat 110	2400	200
	6	d-e	1350	G-D 1500E	1195	250
Viersen & Cochran Drlg	14	dsl	2300	C-E 800A	1554	180
Westburne Drlg	66	dsl	1200	G-D 1100E	1500	180
WASHAKIE						
Anderson-Myers Drlg	15	dsl	1800	S/B N75A	1800	140
WESTON						
L & R Drlg	4	dsl	400	Cbot Rocket	195	30
	6	dsl	318	Cbot 50	318	15/ 3.5"
True Drlg	18	dsl	350	C-E GB250T	350	65

Petroleum
Engineer® INTERNATIONAL

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Canadian Contract Rotary Land Drilling Rigs

ALBERTA

• Contractor	Rig No. •	Type Power •	Total HP All Main Mud Pumps •	Drawworks Make And Model •	Total HP Available to Drawworks •	Rated Depth With 4½-in. Pipe, 100 ft. •
UNDESIGNATED						
Argus Drlg Div Taro Inds	1	dsl	320	Nat T32	327	70
	2	dsl	320	C-E 250T	327	65
	3	dsl	320	MC U34	319	60
	4	dsl	320	MC U34	319	60
	5	dsl	1100	Oilwl 76	1326	118
	7	dsl	320	Nat T32	327	80
Atco Drlg Mustang Div	31	dsl	815	S/B M45	720	85
	35	dsl	820	Nat T45	820	90
	38	dsl	300	Idco H30AD	300	55
	39	dsl	300	Nat T20	300	60
	40	dsl	700	S/B M45	650	85
	41	dsl	300	Idco H30F	350	60
	42	dsl	650	Idco H35	700	75
	45	d-e	1600	Nat 610E	750	120
	50	dsl	300	Idco H30F	350	60
	53	dsl	735	Nat T45	650	90
	54	dsl	715	Idco H35D	650	75
	55	dsl	500	Idco H35	385	65
Baltic Drlg	34	dsl	800	C-E GC350	550	85
Bawden Drlg, Peter	12	mch	1700	C-E D3	1000	160
	33	mch	1850	Oilwl 860	1400	160
Beaver Drlg	1	dsl	300	Nat T32	300	70
	2	dsl	300	Nat T20	300	60
ALBERTA (Cont'd)						
UNDESIGNATED (Cont'd)						
Beaver Drlg	3	dsl	300	Nat T20	300	60
	4	dsl	300	Nat T32	300	70
	5	dsl	300	Nat T32	300	75
	6	dsl	300	Nat 370	550	85
	7	dsl	650	Nat 370	550	95
	8	dsl	300	Nat T32	300	70
	9	dsl	550	Nat 370	550	95
Blocker Drlg	56					160
	57					140
	58					140
	60					100
Blocker Drlg Canada	10	dsl	770	OIME SD3	770	100
	6					
	7	dsl	770	OIME 750SL	1155	140
	9	dsl	770	OIME 750SL	1155	140
Bow Island Drlg	10	dsl	278	W-N 2000	175	30
	3	dsl	278	W-N 2000	175	30
	4	dsl	278	W-N 2000	175	30
	6	dsl	278	W-N 2000	175	30
	7	dsl	278	W-N 2000	175	30
	8	dsl	278	W-N 2000	175	30
	9	dsl	278	W-N 2000	175	30
Brelco Drlg	1	dsl	800	Oilwl 700	900	120
	2	dsl	800	Oilwl 700	900	120
ALBERTA (Cont'd)						
UNDESIGNATED (Cont'd)						
Brelco Drlg	3	dsl	600	Oilwl 500	750	90
	4	dsl	600	Oilwl 500	750	90
	5	dsl	600	Oilwl 500	750	90
	6	dsl	600	Oilwl 500	750	90
	7	dsl	600	Oilwl 700	900	120
Cactus Drlg	1	dsl	750	S/B N55	750	85
	10	dsl		Nat T32	700	78
	11	dsl	350	MC U34	350	65
	14	dsl	750	C-E GB500	750	80
	15	dsl	750	C-E GC350	750	65
	16	dsl	500	MAC 300	500	65
	17	dsl	500	MAC 300	500	65
	18	dsl	500	MAC 300	500	65
	19	dsl	500	MAC 300	500	65
	2	dsl	940	Nat 55	940	115
	20	dsl	1200	C-E D2	1200	140
	24	dsl	300	Beth S55	300	60
	25	d-e	3400	C-E C2	2000	200
	25	d-e	2700	C-E D3	800	180
	28	dsl	1200	S/B N75	1200	125
	3	dsl	350	MC U34	350	65
	4	dsl	350	MC U34	350	65
	5	dsl	1554	Idco Super 711	1554	150
	6	dsl	900	Cntw AO	900	95
	7	dsl	700	C-E GB350	700	85

ALBERTA (Cont'd)

• Contractor	Rig No. •	Type Power •	Total HP All Main Mud Pumps •	Drawworks Make And Model •	Total HP Available to Drawworks •	Rated Depth With 4½-in. Pipe, 100 ft. •
UNDESIGNATED (Cont'd)						
Cactus Drlg	8	del	350	MC U34	350	65
	9	del	350	MC U34	350	65
Can-Tex Drlg & Expl	10	del	800	Nat 370	450	80
	5	del	1200	C-E GB800	1200	120
	6	del	1400	C-E GB80083	1275	140
	7	del	1000	C-E D2	900	120
	8	del	820	Olwl 86	820	90
Capri Drlg	1	del	500	Idco H30D	350	60
	2	del	450	Idco H25	350	60
	3	del	450	Idco H25D	350	60
	4	del	450	Nat T12	300	40
	5	del	700	Nat T32	700	85
	6	del	900	Nat 50A	1350	100
	7	del	450	TSM-3000	380	25
Centennial Drlg	1	del	380	Nat T12	350	45
	2	del	380	C-E 250GA	350	60
	3	del	480	Nat T32	650	85
Challenger Drlg-Calgary	J88E	d-e	2400	Nat 80UE	2800	150
	10-E	d-e	2000	MC U1220EB	2800	220/ 5"
	11	del	350	Nat T20	456	57
	2	del	650	Nat T45	608	90
	39	del	350	Nat T20	456	5,750
	4-E	d-e	1170	Nat T45	1005	90
	44	del	1300	Nat 80B	1950	150
	5-E	d-e	1220	Nat 55	1830	125
	50	del	2000	Nat 110	2385	180
	51	del	1630	Nat 110	1980	180
	55	del	1180	Nat 100HD	1470	165
	8-E	d-e	1500	Nat 80E	2250	145
Garnett Drlg	10	del	1400	Nat 610	900	115
	3	del	900	Crdw J700	900	120
	5	del	900	S/B N55	900	100
	6	del	1100	MC	900	120
	7	del	1600	Nat 610	1200	120
	8	del	300	Olwl 52T	400	60
	9	del	1200	S/B N7	900	110
Jade Drlg	1	del	450	Wils Super 38	300	35
	3	del	550	Idco H25	380	75
	4	del	625	Idco H25	430	75
	5	del	500	Idco H30	430	75
Jomax Drlg	1	del	800	Olwl 52T	455	26
	2	del	800	Olwl 52T	455	26
	3	del	800	Olwl 52T	455	26
	4	del	1200	Olwl 76A	1275	43
	5	del	875	Nat 50A	875	105
	6	d-e	2400	Olwl 780	1600	50
	7	d-e	2400	Olwl 780	1600	50
KCA Drlg	C1	del	1200	Nat 55	612	100
Lemkco Drlg	2	del	800	OIME SO55L	800	100
Loffland Bros	171	d-e	2132	MC U914B	1700	180
	198	del	1400	MC U914A	1580	180
	36	del	2000	MC U914C	2880	200
	72	del	1700	MC U914	2880	200
	9	d-e	2000	MC U914	1980	200
	83	d-e	2100	MC U1220EB	2400	250
Montgomery Drlg Canada	42	d-e	2000	Nat 110UE	2000	200
	46	d-e	2000	Nat 1320UE	2000	200
	49	d-e	2000	Nat 110E	2000	200
Parker Drlg	98	del	1500	Nat 100	1000	170
Phelps Drlg	18	del	500	TSM 6000	450	75
	19	del	500	TSM 6000	450	75
Precision Drlg	6	del	350	Idco H30	350	65
Red Arrow Drlg	1	del	225	Nat T20	275	60
	10	del	225	RAD 200	275	18
	3	del	225	Nat T20	275	60
	4	del	225	RAD 200	275	60
	5	del	225	Nat T20	275	60
	6	del	225	RAD 200	275	60
	7	del	225	RAD 200	275	60
	8	del	225	RAD 200	275	60
	9	del	225	RAD 200	275	60
Regent Drlg	1	del	675	Idco H40	330	75
	10	del	830	S/B N4	900	95
	11	del	2200	Olwl 840-E	2582	200
	12-E	del	2200	G-D 1500	2582	200
	14-E	del	2800	Olwl 840E	1800	200
	15-E	del	2700	G-D 1500	2000	210
	16-E	del	2700	G-D 800E	1000	140
	17-E	del	2700	G-D	1000	140
	21	del	2200	Olwl M2000	2582	200
	22	del	830	MC U36A	580	85
	23	del	800	S/B N4	820	95
	24	del	800	S/B N4	900	95
	25	del	1400	S/B N45	1400	140
	26	del	1400	S/B N45	1400	140
	29	del	350	S/B N4	385	80
	4	del	840	S/B N4	900	95
	5	del	840	S/B N4	820	95
	8	del	1600	G-D 1100	2100	150
	9	del	1400	S/B N45	1400	140
S & T Drlg	7	del	1150	Nat T45	800	95
Sabre Inc	1	del	671	MC U34	671	65
Sedco Drlg	71	del	350	Sup 400	456	60
	77	del	375	Sup 400	456	60
	79	del	318	G-D 3000	318	40
	80	del	375	Shaf 6000	456	60
	81	del	375	Sup 400	318	60
	82		375	Sup 300	318	45
UNDESIGNATED (Cont'd)						
Sedco Drlg	83	del	350	Crdw 190A	318	42
	84	del	320	Sup 300	318	45
	85		300	Sup 300	318	45
	86	del	175	Kremco K600D	450	50
	88	del	350	Crdw S360	360	55
	89	del	350	Idco H30D	318	50
	91	del	330	C-E GB250	456	65
	92	del	350	Sup 400	456	50
	93-E	d-e	375	Sup 400	210	65
	95	del	300	Sup 400	456	60
	96	del	300	Idco H25	318	45
	97	del	300	Nat T32	456	60
	98	del	350	C-E GA250	456	65
Shelby Drlg	1	del		Coop 300DD		50
	2	del		Coop 300DD		50
	3	del	319	Cbot 1287	475	65
	8	del	1200	OIME 750SL	1280	140
Simmons Drlg	11	del	350	Hycalog HH6000	350	60
	12	d-e	1200	G-D 500-E	700	90
	19	del	575	Troy M800	535	75
	8	del	450	Troy 800	700	100
Spartan Drlg	1			Sup 300		60
	10			C-E E	1000	240
	13			Sup 300		60
	2			Sup 700E	700	100
	20			Olwl 500E	900	90
	21			Shaf 6000		65
	22			Nat 370		90
	23			Sup 300		
	3			Sup 400E	700	75
	44			Nat T8		
	5			Sup 300		35
Three Hundred Drlg	Mr Digger	del	900	Nat 370M	900	95
	Mr Gary	del	1200	Sup 700	785	95
	Mr Jim	del	1200	Nat 370M	900	95
	Mr Nick	del	1200	Sup 700	785	95
Tri-City Drlg	1	del	250	Fall 2500	200	30
	10	del	300	Sup 300	300	45
	2	del	300	MC U34	3000	60
	3	del	250	Fall 2500	200	30
	4	del	300	Fall Stratmaster 90	280	50
	5	del	250	Fall 2500	210	30
	6	del	250	Fall 2500	210	30
	7	del	250	Fall 2500	210	30
	8	del	300	Fall 3500	280	35
	9	del	300	Sup 300	300	45
ALDERSYDE						
Arrowhead Drlg	C-9	del	1040	Nat 610	1040	120
ATHABASCA						
Westburne Drlg Canada	33	del	310	Fall 3500	180	35
BAY TREE						
Badger Drlg	4	del	400	Sup 400	400	55
BEATON						
Hi Tower Drlg	10	del	1150	Olwl 76	1220	100
BEAVERLODGE						
Nabors Drlg	23-E	d-e	1600	C-E D2	1800	140
BIG VALLEY						
S & T Drlg	2	del	350	Nat T32	350	70
	9	del	800	Nat 370	800	85
BONANZA						
Guthrie McLaren Drlg	1	del	300	Olwl 52T	400	70
BONNYVILLE						
Canadian Worldwide Energy	1	del	456	Fall 2500	304	30
BOUNDARY LAKE						
Kenting Drlg	15	del	720	Nat 370	720	90
BRETON						
Westburne Drlg Canada	24	del	380	Nat T32	380	70
BROOKS						
Guthrie McLaren Drlg	7	del	300	Nat T32	300	70/ 3.5"
Precision Drlg	1	del	350	Idco H30FD Super	350	65
	8	del	350	Idco H30D	350	65
BUCK LAKE						
Precision Drlg	7	del	350	Idco H30D	400	80
BYEMOOR						
Precision Drlg	9	del	350	Idco H30D	350	75
CADOTTE						
Adeco Drlg & Engr	14	del	312	Nat T32	320	70
CAROLINE						
Guthrie McLaren Drlg	3	del	680	Nat 50CA	600	100
CARSTAIRS						
Westburne Drlg Canada	10	del	1275	Nat 80	1275	130
	42	del	380	Nat T20	380	55
CLEAR PRAIRIE						
Hi Tower Drlg	21E	d-e	3200	C-E D3	1000	180
CROSSFIELD						
Rocky Mountain Drlg	3	del	1650	Nat 80	1650	150
CUTOFF CREEK						
Adeco Drlg & Engr	8	del	1500	Nat 100M	2340	180
CYNTHIA						
Bawden Drlg, Peter	16	mch	1800	C-E D3	1000	120
Nabors Drlg	16	del	2000	C-E A880	1740	180
S & T Drlg	1					
DEBOLT						
Nabors Drlg	21-E	d-e	3200	C-E IIC	3800	200
DRAYTON VALLEY						
Hi Tower Drlg	1	d-e	3800	Nat 1320UE	2000	200
Precision Drlg	10	del	350	Idco H35D	350	72
	4	del	350	Idco H30D	350	72
	5	del	350	Idco H525D	350	75
ECKVILLE						
Hi Tower Drlg	3	del	900	Olwl 86	1020	100
EDMONTON						
Guthrie McLaren Drlg	6	del	300	Fall 2000A	225	30
Westburne Drlg Canada	37	del	380	G-D 2500	170	35
EDSON						
Arrowhead Drlg	C-5	del	1560	Nat 808	1560	150
Hi Tower Drlg	11	del	350	Sup 400	540	65
	7	del	1000	Olwl 86	1100	100
Nabors Drlg	4	del	2000	Olwl 76	1740	140
FORT McLEOD						
Arrowhead Drlg	C-8	del	1040	Nat 610	1040	120
FORT SASKATCHEWAN						
Hi Tower Drlg	18	d-e	1800	Olwl 780	1300	150
Nabors Drlg	5	del	700	Olwl 76	1328	120
FOX CREEK						
Guthrie McLaren Drlg	9	del	1940	OIME 1500	1940	180
Kenting Drlg	4	del	720	610	720	115
Nabors Drlg	24-E	d-e	2000	C-E Electrohoist 2C	2925	140
GARRINGTON						
Adeco Drlg & Engr	15	del	385	Nat T45	575	105
	16	del	308	Nat T32M	320	25
	3	del	308	Nat T32	320	70
Bawden Drlg, Peter	17	mch	1100	G-D 500	500	90
GORDEN						
S & T Drlg	10	del	350	MC U34	350	60
GRANDE PRAIRIE						
Arrowhead Drlg	C-10	del	1560	Nat 808	1560	150
Kenting Drlg	24	del	350	Nat 370	350	90
	10	del	720	Olwl 86	720	100
Nabors Drlg	19-E	d-e	2000	C-E CI	3800	200
Westburne Drlg Canada	4	del	1040	C-E GC500	1040	110
GRIMSHAW						
Westburne Drlg Canada	26	del	960	Nat 55	960	110
HARMATTAN						
Arrowhead Drlg	C-2	del	770	Nat 370	770	90
	C-4	del	1040	Nat 610	1040	120
Kenting Drlg	29	del	1040	Nat 610	1040	120
	3	del	1000	C-E GC500	1000	120
HIGH PRAIRIE						
Guthrie McLaren Drlg	2	del	300	S/B N4	300	65/ 3.5"
Westburne Drlg Canada	8	del	380	Idco H40D	380	70
HIGH RIVER						
Arrowhead Drlg	C-1	del	1040	Nat 610	1040	120
LAC LA BICHE						
Westburne Drlg Canada	39	del	310	Fall 3500	335	35

ALBERTA (Cont'd)

• Contractor	Rig No. •	Type Power •	Total HP All Main Mud Pumps •	Drawworks Make And Model •	Total HP Available to Drawworks •	Rated Depth With 4½-in. Pipe, 100 ft. •
LAMONT						
Badger Drlg	1	del	300	Idco H30	250	50
LEDUC						
Precision Drlg	11	del	350	Idco H40PD	350	72
S & T Drlg	4	del	700	Nat 50CA	400	80
LLOYDMINSTER						
Westburne Drlg Canada	32	del	300	Fall 2500	210	30
LODGEPOLE						
Precision Drlg	15	del	350	Idco H30FD	350	75
LUBICON						
Kenting Drlg	5	del	350	Sup 400	350	75
MEDICINE HAT						
Westburne Drlg Canada	40	del	310	Fall 2500	175	30
MITSUE						
Rocky Mountain Drlg	2	del	1150	G-D 500	700	85
Westburne Drlg Canada	12	del	800	C-E GA350	800	80
	26	del	380	Nat T32	380	70
NISKU						
Kenting Drlg	32-E	d-e	3720	Nat 110UE	2000	180
	39-E	d-e	3000	Nat 1320UE	2000	200
NITON JUNCTION						
Precision Drlg	14	del	350	Idco H40	500	75
OLDS						
S & T Drlg	3 6	del	1200	Nat 55	1200	115
PEACE RIVER						
Bawden Drlg, Peter	20	mch	1000	G-D 500	500	90
Guthrie McLaren Drlg	4	del	375	Draco D500	450	70
	5	del	750	Nat 50CA	400	85
Kenting Drlg	37	del	350	Sup 400	700	75
PEMBINA						
Adeco Drlg & Engr	2	del	380	OIME 803	365	85
PIGEON LAKE						
Guthrie McLaren Drlg	12	del	525	Sup S400	380	62
PINCHER CREEK						
Bawden Drlg, Peter	25	d-s	2000	C E C1 Type II	1500	180
PROVOST						
Precision Drlg	3	del	350	Idco H30 Super 2FD	350	65
RIMBEY						
Arrowhead Drlg	C-6	del	770	Nat 370	770	90
Kenting Drlg	9	del	720	Nat T32	720	75
Precision Drlg	12	del	500	Idco H30D	350	75
ROCKY MOUNTAIN HOUSE						
Arrowhead Drlg	C-11	del	1580	Nat 80B	1580	150
	C-7	del	1040	Nat 610	1040	120
Guthrie McLaren Drlg	11	del	450	Sup 500	450	70
SASKATCHEWANBATTRUM						
Westburne Drlg Canada	50	del	240	Fall 2500	180	30
SIMONETTE						
Kenting Drlg	22-E	d-e	2000	Nat 80UE	1000	130
SLAVE L						
Adeco Drlg & Engr	16	del	308	Nat T32	312	70
SMOKEY						
Hi Tower Drlg	20	d-e	1800	Oiwl 780	1000	150
SPIRIT RIVER						
S & T Drlg	5	del	1150	Nat 50A	800	95
ST PAUL						
Ensign Drlg	2	del	440	C-E	440	19
Guthrie McLaren Drlg	8	del	300	Fall 2500A	225	30
STURGEON LAKE						
Nabors Drlg	15	del	1200	C-E A550	884	110
SUFFIELD						
Westburne Drlg Canada	35	del	310	Fall 2500	180	30
SUNDRE						
Blocker Drlg Canada	6	del	1000	OIME 1000SL	1800	160

ALBERTA (Cont'd)

• Contractor	Rig No. •	Type Power •	Total HP All Main Mud Pumps •	Drawworks Make And Model •	Total HP Available to Drawworks •	Rated Depth With 4½-in. Pipe, 100 ft. •
SWAN HILLS						
Kenting Drlg	33-E	d-e	2000	Nat 610E	1000	115
SYLVAN LAKE						
Badger Drlg	2	del	400	Nat 370	500	72
TEES						
Precision Drlg	16	del	700	C-E PD650	650	100
THORSBY						
Badger Drlg	90	del	515	Sup 300	515	60
TINDISTOLL						
Adeco Drlg & Engr	1	del	308	Nat T20	320	17
TORRINGTON						
Badger Drlg	6	del	400	Nat 370	500	75
TURNER VALLEY						
Kenting Drlg	27	del	1040	Nat 610	1040	120
UTIKIMA						
Adeco Drlg & Engr	18	del	700	OIME Hellhoist 500C	1370	23
Westburne Drlg Canada	15	del	900	S/B N4	600	85
VALHALLA						
Adeco Drlg & Engr	12	del	312	Nat T32	320	70
VALLEY VIEW						
Rocky Mountain Drlg	4	del	1050	Unit U36A	1050	100
VERMILION RIVER						
Ensign Drlg	1	del	440	Cbot 42	290	110
WEMBLEY						
Hi Tower Drlg	2	del	780	Oiwl 66	800	95
WORSLEY						
Westburne Drlg Canada	14	del	1080	Nat 50A	1080	95
ZAMA						
Guthrie McLaren Drlg	10	del	300	Sup D500	450	70
Hi Tower Drlg	17	del	560	Nat 50A	340	70
	19	del	620	Oiwl 52T	545	70
Kenting Drlg	18	del	800	Nat 50A	800	95/ 5"
	28	del	700	Nat 370	700	90
Rocky Mountain Drlg	1	del	650	Nat 370	650	85
Westburne Drlg Canada	17	del	1080	C-E GB350	720	80

BRITISH COLUMBIA

• Contractor	Rig No. •	Type Power •	Total HP All Main Mud Pumps •	Drawworks Make And Model •	Total HP Available to Drawworks •	Rated Depth With 4½-in. Pipe, 100 ft. •
UNDESIGNATED						
Baltic Drlg	12	del	525	Nat T32	325	75
	14	del	800	Nat 50AM	550	95
	2	del	1600	Nat 80B	1650	150
	24	del	300	Nat T20	326	65
	3	del	1000	Sup 700	600	95
Challenger Drlg-Calgary	15	del	800	Idco Sup 711	1300	125
Loffland Bros	3	del	1850	MC U814A	2880	180
Parker Drlg	94	del	1700	Nat 100M	1000	180
Regent Drlg	2	del	840	S/B N55	820	95
	26	del	840	Idco H40	330	75
	3	del	840	S/B N4	900	95
ARRAS						
Nabors Drlg	3	del	1700	Oiwl 78	1326	140
CARBON						
Adeco Drlg & Engr	6	del	1500	Nat 100M	2340	180
DAWSON CREEK						
Bawden Drlg, Peter	1	mch	1000	C-E GB500	500	85
Nabors Drlg	9	del	2000	Nat 110	2250	180
FORT NELSON						
Hi Tower Drlg	4	d-e	3200	Oiwl E2000	2000	250
Kenting Drlg	7	del	720	C-E GC500	720	105
FORT ST JOHN						
Bawden Drlg, Peter	8	d-e	2200	Oiwl 860	1400	200
Hi Tower Drlg	12	del	280	Nat T32	335	65
	14	del	280	Oiwl 52T	350	65
PEMBERTON						
Westburne Drlg Canada	1	del	1580	Nat 80B	1580	130

BRITISH COLUMBIA (Cont'd)

• Contractor	Rig No. •	Type Power •	Total HP All Main Mud Pumps •	Drawworks Make And Model •	Total HP Available to Drawworks •	Rated Depth With 4½-in. Pipe, 100 ft. •
SIKANNI						
Westburne Drlg Canada	22	del	1010	Nat 50A	700	85
WONOWON						
Nabors Drlg	6	del	300	Idco H35	300	60

MANITOBA

• Contractor	Rig No. •	Type Power •	Total HP All Main Mud Pumps •	Drawworks Make And Model •	Total HP Available to Drawworks •	Rated Depth With 4½-in. Pipe, 100 ft. •
UNDESIGNATED						
Red Arrow Drlg	11	del	225	RAD 200	275	60
	12	del	225	RAD 200	275	18
	2	del	225	Nat T12	275	50
KIRKELLA						
Crown Drlg	2	del	784	S-H 5000	476	50
WASKADA						
Crown Drlg	4	del	714	MC U34	382	60

NORTHWEST TERRITORIES

• Contractor	Rig No. •	Type Power •	Total HP All Main Mud Pumps •	Drawworks Make And Model •	Total HP Available to Drawworks •	Rated Depth With 4½-in. Pipe, 100 ft. •
UNDESIGNATED						
Pan Arctic Drlg	A	d-s	1600	OIME 1000E	1000	120
	B	d-s	1000	Nat 80E	800	120
	C	d-s	1600	OIME 1000E	1000	120
Parker Drlg	99-HH/6	del	1500	OIME Hellhoist 1500	1500	170
Three Hundred Drlg	Ben	del	900	Nat 370M	800	95
NORMAN WELLS						
Kenting Drlg	33-E	d-e	1000	Sup 700E	700	90
RAE POINT						
Adeco Drlg & Engr	4	del	1380	OIME Hellhoist 1500	2000	170

ONTARIO

• Contractor	Rig No. •	Type Power •	Total HP All Main Mud Pumps •	Drawworks Make And Model •	Total HP Available to Drawworks •	Rated Depth With 4½-in. Pipe, 100 ft. •
UNDESIGNATED						
Underwater Gas Dev	2	del	200	I-R T5	350	50
	6	del	200	I-R T5	350	50
LAMBTON						
Corunna Petr	2	del	475	Idco 525	636	85
	3	del	950	Hoop GJOITA	700	55

QUEBEC

• Contractor	Rig No. •	Type Power •	Total HP All Main Mud Pumps •	Drawworks Make And Model •	Total HP Available to Drawworks •	Rated Depth With 4½-in. Pipe, 100 ft. •
UNDESIGNATED						
Regent Drlg	6	del	1400	S/B N45	1400	140

SASKATCHEWAN

• Contractor	Rig No. •	Type Power •	Total HP All Main Mud Pumps •	Drawworks Make And Model •	Total HP Available to Drawworks •	Rated Depth With 4½-in. Pipe, 100 ft. •
Atco Drlg Mustang Div	33	del	300	Nat T20	300	55
	34	del	300	Nat T20	350	55
	51	del	300	Idco H25	350	60
Baltic Drlg	25	del	475	Nat T20	326	65
Bird Drlg	2	del	455	Nat 370	500	80
	5	del	615	Nat 370	800	95
Bow Island Drlg	1	del	278	W-N 2000	175	30
	11	d-e	300	W-N	300	50
	17	del	278	Nat T12	278	50
	18	del	278	Nat T12	278	50
	2	del	278	W-N 2000	175	30
	5	del	3000	W-N 2000	175	30
Jade Drlg	2	del	400	Wils Super 38	300	35
Phelps Drlg	20	del	326	TSM 6000	450	75
Sedco Drlg	87	del	300	Crdw L	318	40
	90	del	350	MC U34D	456	55
	94	del	300	Crdw L	210	40
	98	del	350	Nat T20	456	60
Simmons Drlg	14	del	575	Troy M600	535	75
	15	del	350	MC U34	350	600
	2	del	350	Oiwl 52T	350	68
	4	del	350	Oiwl 52T	350	66
BEVERLEY						
Westburne Drlg Canada	34	del	360	Idco HD25	360	45
DODSLAND						
Westburne Drlg Canada	31	del	180	Fall 2500	275	30
KINDERSLEY						
Precision Drlg	2	del	350	Idco H20AD	350	45
MAJOR						
Westburne Drlg Canada	38	del	310	Fall 2500	180	30

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RICHTER DRILLING PTY LTD 43 Creek St 11th Floor GPO Box 2197 Brisbane Queensland 4000 Australia (07) 229-2544
SAIPEM SPA PO Box 12072 San Donato Milanese 20097 Milano Italy 02 5201
SANTA FE DRILLING CO 505 S Main St PO Box 1401 Orange CA 92668 714-558-1300
SEDCO INC 1901 N Akard Dallas TX 75201 214-653-8700
SIMMONS DRILLING LTD 600-1177 11th Ave SW Calgary Alberta T2R 1K9 Canada 403-244-5340
SKINNER MARINE OPERATIONS LTD PO Box 46 San Fernando Trinidad West Indies 65-77265
SONAT OFFSHORE DRILLING INC GROUP PO Box 2765 Houston TX 77001 713-871-7500
SONPETROL Orense no 32-1o Madrid 20 Spain 455.18.58
HERMANN VON RAUTENKRANZ INTERNATIONALE TIEFBOHR GMBH CO KG ITAG PO Box 114 D-3100 Celle Germany

International Contract Rotary Land Drilling Rigs

AFRICA

• Contractor	Rig No. •	Type Power •	Total HP All Main Mud Pumps •	Drawworks Make And Model •	Total HP Available to Drawworks •	Rated Depth With 4½-in. Pipe, 100 ft. •
ALGERIA						
SAIPEM	5881	d-e	3200	Nat 110DE	1500	200
	5882	d-e	3200	Nat 110DE	1500	200
	5883	d-e	3200	Nat 110DE	1500	200
	5884	d-e	3200	Nat 110DE	1500	200
	5885	d-e	3200	Nat 110DE	1500	200
CONGO						
Sonpetrol	E-5	del	2200	C-E J1100	1300	140
	GC-1	del	1700	C-E GC500	800	100
EGYPT						
Challenger Ltd	18	del	900	Cbot 100	500	120
Forex Neptune and/or Affl	22	d-e	3200	G-D 2100	2300	254
	33	d-e	3200	G-D 1100	1500	180
	7	del	3200	Nat 110	1600	190
Geoprosco Intl	41	del	2200	Idco H900	1100	100
Santa Fe Drlg	102	d-e	2400	Nat 110UE	1500	160
	64	del	1800	Nat 110	1800	160
	69	d-e	2800	Nat 1320DE	3400	200
	73	del	2000	Nat 110	1800	180
	75	del	2000	Nat 1320M	1800	200
	82	d-e	2800	Nat 1320UE	1400	200
	94	d-e	2250	Nat 110UE	2000	180
	97	d-e	2880	Oiwl E2000	2000	200
SAIPEM	5863	d-e	3200	Nat 110DE	1500	200
GABON						
Forex Neptune and/or Affl	27	del	2800	Idco Super 711	1200	180
LIBYA						
Arab Drlg & Workover	ADWOC-2	d-e	2800	C-E C111	1500	200
	ADWOC3	d-e	2800	C-E C111	1500	200
	118	del	1250	Idco H525	700	90
	37	del	1550	Nat 80B	1800	120
	53	del	1250	Idco H525	700	90
	54	del	1400	Nat 80B	1800	120
Challenger Ltd	19	del	1300	Nat 80B	1950	150
Deutsche Tiefbohr	T-16	del	2000	C-E A800	1000	120
	T-26	del	2100	Idco Super 711	1500	180
	T-90	del		H-L 6206	400	
	T-91	del		H-L 6205	130	
Forex Neptune and/or Affl	13	del	2500	Idco Super 711	1200	180
	2	del	2800	Idco Super 711	1800	180
	35	d-e	3200	G-D 1110E	1600	180
	41	del	1300	Idco H525	640	90
	42	del	2000	Nat 80UE	1000	157
	43	d-e	2000	Nat 80UE	1000	157
	44	del	3200	Idco Super 711	1800	180
KCA Drlg	100	del	750	Crdw KM250	375	80
	101	del	375	Cbot 1058	375	120
	102	del	375	Cbot 1058	375	120
	103	del	375	Cbot 1058	375	120
	83	del	2000	MC U36EA	1000	100
Oil Drlg & Expl	7	del	2000	Idco Super 711	2000	170
	9	del	2000	Idco Super 711	2000	170
Santa Fe Drlg	ADWOC 1	d-e	2800	C-E C111	1500	200
NIGERIA						
Forex Neptune and/or Affl	1	del	2600	Idco Super 711	1200	180
	10	del	2600	Nat 110	1600	190
	11	d-e	3200	Nat 110UE	1500	190
	23	d-e	3200	G-D 2100RE	3000	254
	24	d-e	3200	G-D 2100RE	3000	254
	25	d-e	3200	G-D 2100RE	3000	254
	26	del	2800	Idco Super 711	1200	180
	4	del	550	Idco H525	500	90
	49	d-e	3200	G-D 1100E	1500	180
	5	del	2800	Nat 1105	1600	190
	9	del	2850	Nat 110	1600	190
SAIPEM	5838	del	2500	Idco H1700	1590	165
	5847	del	2130	Idco H1700	1375	165
	5850	del	1135	Idco H40	432	48
	5860	del	2500	Idco H1700	1590	165
SOMALIA						
Parker Drlg	143	del	2000	Nat 110	3300	200
SUDAN						
Parker Drlg	105-HH/2	del	1200	OIME	1275	142
	118-HH/10	del	1950	OIME	1700	180
	195-HH/42	del	2000	OIME TBA2000	2000	200
TUNISIA						
Blocker Drlg-Alice	10	del	825	Idco Hydrair H37ESC	434	75
	18	del	1475	Cbot 2346	850	100
Blocker Drlg-Houston	47					200
Forex Neptune and/or Affl	36	d-e	3200	G-D	1800	180
SAIPEM	5842	del	2250	Idco H1700	1740	165
	5846	del	2250	Idco H1700	1740	165

AFRICA (Cont'd)

ZAIRE

Contractor	Rig No.	Type Power	Total HP All Main Mud Pumps	Drawworks Make And Model	Total HP Available to Drawworks	Rated Depth With 4½-in. Pipe, 100 ft.
Von Rautenkranz Hermann	ITAG-102	dsl	900	Wils Mogul 42		100

ASIA PACIFIC

AUSTRALIA

Contractor	Rig No.	Type Power	Total HP All Main Mud Pumps	Drawworks Make And Model	Total HP Available to Drawworks	Rated Depth With 4½-in. Pipe, 100 ft.
Oil Drlg & Expl	12	dsl	1500	Idco H725	750	100
	15	dsl	2000	Idco H1700	2000	170
	16	dsl	1600	Idco 1200	1600	140
	5	dsl	1100	Idco Super 711	1100	130
	6	dsl	1200	Nat 55	850	100
	8	dsl	350	Idco H35	500	45
Richter Drlg Pty	11	dsl		Coop 750	375	100
	14	d-e	2000	Nat 80UE	1000	120
	16	dsl	275	S/B RR550	450	65
	2	dsl	1600	Nat 55	900	100
	4	dsl	600	Nat T32	300	60
	5	dsl		Coop 750		100
	9	dsl	2000	Nat 80B	1000	120
Simmons Drlg	SC#1	dsl	350	Hycalog HH6000	350	68

BRUNEI

Contractor	Rig No.	Type Power	Total HP All Main Mud Pumps	Drawworks Make And Model	Total HP Available to Drawworks	Rated Depth With 4½-in. Pipe, 100 ft.
Deutsche Tiefbohr	T-41	dsl	[illegible]800	Wils 780	780	80

INDONESIA

Contractor	Rig No.	Type Power	Total HP All Main Mud Pumps	Drawworks Make And Model	Total HP Available to Drawworks	Rated Depth With 4½-in. Pipe, 100 ft.
Bawden Drlg Intl	28	dsl	925	C-E GB350	350	72
	29	d-e	1400	Nat 80E	1000	120
	51	dsl	1200	Sup 700	700	100
	6	dsl	1000	Nat T45	550	75
Deutsche Tiefbohr	T-31	dsl	1000	Wils 780	910	80
Houlder Marine Drlg	1	d-e	1600	Nat 80UE	1000	120
Loffland Bros	139	dsl	1400	MC U36	900	100
	300	dsl	600	MC U34	500	40
	56	dsl	900	MC U36A	900	100
Parker Drlg	106-HH/3	dsl	1600	OIME	1275	140
	115-HH/8	dsl	1200	OIME	1700	180
	125-HH/13	dsl	1200	OIME	1700	180
	130-HH/18	dsl	1500	OIME TBA2000	1700	200
	140-HH/26	dsl	1500	OIME TBA2000	1700	200
	148-HH/32	dsl	1500	OIME TBA2000	1700	200
	156-HH/36	dsl	1500	OIME TBA2000	1700	250
	160	dsl	1500	OIME TBA2000	1700	200
	188-HH/38	dsl	2000	OIME TBA2400	2000	240
	190-HH/39	dsl	1500	OIME TBA2000	1700	200
PT Malhabor Indonesia	MBI 1	dsl	600	Nat 610	750	120
PT Meta Epsi Drlg	1	dsl	1000	Nat 610	850	120
	2	d-e	1050	HS1500E	1500	150
	3	d-e	1050	HS1500E	1500	150
	4	d-e	2600	S/B NE95A	1800	200
Richter Drlg Pty	7	dsl	1600	Nat 610	750	100

NEW ZEALAND

Contractor	Rig No.	Type Power	Total HP All Main Mud Pumps	Drawworks Make And Model	Total HP Available to Drawworks	Rated Depth With 4½-in. Pipe, 100 ft.
Oil Drlg & Expl	17	d-e	2800	Idco E2100	2800	210

PAKISTAN

Contractor	Rig No.	Type Power	Total HP All Main Mud Pumps	Drawworks Make And Model	Total HP Available to Drawworks	Rated Depth With 4½-in. Pipe, 100 ft.
Challenger Ltd	81E	dsl	2800	G-D 1100E	1500	200
Deutsche Tiefbohr	T-10	dsl	2700	Nat 110H	1500	180
	T-35	dsl	1600	Coop LTO750	750	100
Little-Deutag	T-35	dsl	1600	Coop LTO750	750	100
Parker Drlg	126-HH/14	dsl	1500	OIME TBA2000	1700	200

PHILIPPINES

Contractor	Rig No.	Type Power	Total HP All Main Mud Pumps	Drawworks Make And Model	Total HP Available to Drawworks	Rated Depth With 4½-in. Pipe, 100 ft.
Richter Drlg Pty	6	dsl	1350	Nat 100	1000	140
	8	dsl	1400	Nat 110M	1100	150

SINGAPORE

Contractor	Rig No.	Type Power	Total HP All Main Mud Pumps	Drawworks Make And Model	Total HP Available to Drawworks	Rated Depth With 4½-in. Pipe, 100 ft.
Bawden Drlg Intl	8	d-s	3200	Nat 1320UE	2000	220
Forex Neptune and/or Affl	45	d-e	1960	Wils EH120	1100	189

THAILAND

Contractor	Rig No.	Type Power	Total HP All Main Mud Pumps	Drawworks Make And Model	Total HP Available to Drawworks	Rated Depth With 4½-in. Pipe, 100 ft.
Deutsche Tiefbohr	T-46	d-e	2600	C-E C2	2000	200
	T-48	d-e	2600	C-E A800	1000	160

ASIA PACIFIC (Cont'd)

THAILAND (Cont'd)

Contractor	Rig No.	Type Power	Total HP All Main Mud Pumps	Drawworks Make And Model	Total HP Available to Drawworks	Rated Depth With 4½-in. Pipe, 100 ft.
Parker Drlg	194-HH/41	dsl	2000	OIME TBA2000	2000	200
	200-HH/44	dsl	2000	OIME TBA2000	2000	200
Sedco Inc	91	d-e	3400	Nat 110UE	2000	160

CENTRAL AMERICA

BELIZE

Contractor	Rig No.	Type Power	Total HP All Main Mud Pumps	Drawworks Make And Model	Total HP Available to Drawworks	Rated Depth With 4½-in. Pipe, 100 ft.
Hughes Drlg	8	dsl	550	Idco H35	400	62

GUATEMALA

Contractor	Rig No.	Type Power	Total HP All Main Mud Pumps	Drawworks Make And Model	Total HP Available to Drawworks	Rated Depth With 4½-in. Pipe, 100 ft.
Forex Neptune and/or Affl	30	d-e	3200	G-D	2000	217
	39	dsl	1300	Idco H525	500	90
Helmerich & Payne (Guatemala)	16	d-e	2600	HS1500	1500	180
	45	d-s	3000	Nat 1320UE	2000	250

EUROPE

AUSTRIA

Contractor	Rig No.	Type Power	Total HP All Main Mud Pumps	Drawworks Make And Model	Total HP Available to Drawworks	Rated Depth With 4½-in. Pipe, 100 ft.
Preussag Aktiengesellschaft	GH35	dsl	2000	DeMg GH35	1500	165

DENMARK

Contractor	Rig No.	Type Power	Total HP All Main Mud Pumps	Drawworks Make And Model	Total HP Available to Drawworks	Rated Depth With 4½-in. Pipe, 100 ft.
Kenting Drlg Serv	21	d-e	1000	Nat 80UE	1000	140/5"

FRANCE

Contractor	Rig No.	Type Power	Total HP All Main Mud Pumps	Drawworks Make And Model	Total HP Available to Drawworks	Rated Depth With 4½-in. Pipe, 100 ft.
COSIFOR	E-350	dsl	1500	C-E 350	550	90
	G10E	d-e	1600	Nat 610E	800	120
	N-110	dsl	2500	Nat 110	1500	160
Forex Neptune and/or Affl	14	dsl	1600	C-E GC500	500	108
	16	d-e	2900	C-E 1100DE	1500	180
	17	dsl	2000	C-E A800	800	120
	18	dsl	900	Idco H40	500	90
	19	dsl	1650	Nat 55	780	108
	28	dsl	1200	Idco H25	250	44
	29	dsl	450	Nat 55	700	108
	3	dsl	1250	Idco H525	700	90
	31	dsl	3200	Idco Super 711	1200	180

GREECE

Contractor	Rig No.	Type Power	Total HP All Main Mud Pumps	Drawworks Make And Model	Total HP Available to Drawworks	Rated Depth With 4½-in. Pipe, 100 ft.
SAIPEM	5889	dsl	3200	Idco E3000	3000	300

ICELAND

Contractor	Rig No.	Type Power	Total HP All Main Mud Pumps	Drawworks Make And Model	Total HP Available to Drawworks	Rated Depth With 4½-in. Pipe, 100 ft.
Orkustofnun State Drlg Contrs	DOFRI	dsl	1350	Oiwl 52T	320	73
	GLAUMUR	dsl	290	Fail 2000	290	37/2.88"
	JOTUNN	d-e	1500	G-D 700E	750	140
	NARFI	dsl	580	Fail 3000	290	60/3.5"
	YMIR	dsl	180	May 1000	180	18/2.37"

ITALY

Contractor	Rig No.	Type Power	Total HP All Main Mud Pumps	Drawworks Make And Model	Total HP Available to Drawworks	Rated Depth With 4½-in. Pipe, 100 ft.
SAIPEM	5803	dsl	1400	Idco Super 711	885	114
	5806	dsl	440	Crdw 02	580	81
	5829	d-e	2000	C-E D3	1000	100
	5832	d-e	3200	Idco E2100	2000	200
	5833	d-e	3200	Idco E2100	2000	200
	5838	dsl	2800	Idco 1350S	1950	200
	5840	d-e	2600	Idco H1700	1700	165
	5852	d-e	880	Idco E525	625	60
	5855	dsl	1800	Idco H1200	1740	126
	5856	dsl	1700	Idco H1200	1740	126
	5858	dsl	1135	Idco H40	432	48
	586[illegible]	d-e	2900	C-E C3 Type II	3000	250
	5872	d-e	2800	Nat 1625	3000	250
	5886	d-e	3200	Nat 1625	3000	250
	5896	d-e	2600	Idco HE1700	1700	165
	5899	dsl	1400	Crdw 03	1050	104

NETHERLANDS

Contractor	Rig No.	Type Power	Total HP All Main Mud Pumps	Drawworks Make And Model	Total HP Available to Drawworks	Rated Depth With 4½-in. Pipe, 100 ft.
Deutsche Tiefbohr	T-19	dsl	2600	Nat 80BE	1000	140
	T-27	d-e	3200	Nat 130	1625	200
	T-32	dsl	420	Idco H35KD	300	58
	T-40	d-e	2600	Nat 80B	1000	150

PORTUGAL

Contractor	Rig No.	Type Power	Total HP All Main Mud Pumps	Drawworks Make And Model	Total HP Available to Drawworks	Rated Depth With 4½-in. Pipe, 100 ft.
Boldon Drlg	81	d-e	800	Nat 80UE	1000	140

EUROPE (Cont'd)

SPAIN

Contractor	Rig No.	Type Power	Total HP All Main Mud Pumps	Drawworks Make And Model	Total HP Available to Drawworks	Rated Depth With 4½-in. Pipe, 100 ft.
Compania Gen De Sondeos SA	G450	dsl	1050	C-E G450	450	100
	Skytop RR 650	mch	1000	S/B 650	575	20
	110	dsl	2700	Nat T2029	1700	197
	1320	d-e	2600	Nat 1320UE	2500	200
	800	dsl	2400	G-D	1470	148
Sonpetrol	GD-2	dsl	1100	G-D 500	600	106
	N-7	dsl	3200	Nat 1625	3000	250
	N-8	dsl	2000	Nat 80UE	1000	140
	N-9	el	2800	Nat 110	2750	180

SWITZERLAND

Contractor	Rig No.	Type Power	Total HP All Main Mud Pumps	Drawworks Make And Model	Total HP Available to Drawworks	Rated Depth With 4½-in. Pipe, 100 ft.
Deutsche Tiefbohr	T-7	dsl	1300	Nat 80B	1000	110

TURKEY

Contractor	Rig No.	Type Power	Total HP All Main Mud Pumps	Drawworks Make And Model	Total HP Available to Drawworks	Rated Depth With 4½-in. Pipe, 100 ft.
KCA Drlg	71	dsl	1800	Nat 80B	1000	120
	73	dsl	1800	Nat 80B	1000	120

UNITED KINGDOM

Contractor	Rig No.	Type Power	Total HP All Main Mud Pumps	Drawworks Make And Model	Total HP Available to Drawworks	Rated Depth With 4½-in. Pipe, 100 ft.
Boldon Drlg	21	dsl	370	Nat T20	290	45
	22	dsl	590	Nat T20	335	55
	23	dsl	350	Nat T20	280	40
	61	d-e	600	Oiwl 660E	700	100
Houlder Marine Drlg	2	d-e	1600	Sup 700E	1000	90
Kenting Drlg Serv	12	dsl	350	S/B N45	350	80/4"
	17	dsl	350	Fail 90	350	50/3.5"
	19	dsl	350	G-D 3000	230	45/3.5"
	26	dsl	330	Sup 400	350	70/4"
	31	d-e	1000	Nat 80UE	1000	140/5"
	34	d-e	940	Nat 610UE	750	115
	36	d-e	940	Sup 700UE	700	100
KCA Drlg	94	dsl		Cbot 550	375	45

WEST GERMANY

Contractor	Rig No.	Type Power	Total HP All Main Mud Pumps	Drawworks Make And Model	Total HP Available to Drawworks	Rated Depth With 4½-in. Pipe, 100 ft.
Deutsche Tiefbohr	T-1	dsl	335	Idco H1000	910	80
	T-14	dsl	2400	C-E A800	1000	140
	T-3	dsl	420	Idco H44CD	460	50
	T-30	d-e	1000	Idco E725D	725	60
	T-36	dsl	1600	Idco H1000	960	80
	T-4	dsl	500	Idco H30	455	60
	T-47	d-e	3900	C-E C3	3000	300
	T-5	dsl	335	Idco H525D	910	60
	T-8	dsl	335	Idco H1000	910	80
	T-81	dsl	375	Coop LTO350	200	40
	T-82	dsl	375	Coop LTO350	200	40
	T-83	dsl		Salt ZA198	200	
	T-84	dsl		Salt ZA198	200	
	T-85	dsl		Salt ZA198	200	
	T-9	dsl	335	Idco H1000	910	80
	T-92	dsl		H-L 6205	130	
	T-93	dsl		H-L 6205	130	
	T-94	dsl		H-L 6205	130	
	T45	d-e	2800	C-E C2	2000	200
Preussag Aktiengesellschaft	GH-25	dsl	2000	Wirth GH25	1000	140
	ZA292	dsl	500	Salt	180	30
	1320UE	dsl	3200	Nat 3120UE	2000	250
	2	dsl	1500	Cbot 2346	840	100
	900/3	dsl	1450	I-R 2346	900	100
SAIPEM	5870	d-e	3200	Nat 1625	3000	250
Von Rautenkranz Hermann	ITAG 22	dsl	3000	Nat 110M		200
	ITAG-104	dsl	1450	Wils Mogul		80
	ITAG-106	dsl	1600	Wils M75		100
	ITAG-109	dsl	600	Wils M75		700
	ITAG-23	d-e	3000	Oiwl 2000E		250

MIDDLE EAST

BAHRAIN

Contractor	Rig No.	Type Power	Total HP All Main Mud Pumps	Drawworks Make And Model	Total HP Available to Drawworks	Rated Depth With 4½-in. Pipe, 100 ft.
Santa Fe Drlg	142	dsl	2600	Nat 110UE	1500	180

IRAN

Contractor	Rig No.	Type Power	Total HP All Main Mud Pumps	Drawworks Make And Model	Total HP Available to Drawworks	Rated Depth With 4½-in. Pipe, 100 ft.
SAIPEM	5837	dsl	2600	Idco 1350S	1950	200

IRAQ

Contractor	Rig No.	Type Power	Total HP All Main Mud Pumps	Drawworks Make And Model	Total HP Available to Drawworks	Rated Depth With 4½-in. Pipe, 100 ft.
SAIPEM	5843	d-e	2800	Oiwl E2000	2000	200
	5848	dsl	2600	Idco H1700	1740	165
	5849	dsl	2600	Idco H1700	2100	165

KUWAIT

Contractor	Rig No.	Type Power	Total HP All Main Mud Pumps	Drawworks Make And Model	Total HP Available to Drawworks	Rated Depth With 4½-in. Pipe, 100 ft.
Energeers Ltd	1	d-e	2000	MC D3	1000	130
Kuwait Drlg	KDC-10	d-e	5100	Oiwl E3000	3000	300
	KDC-11	d-e	5100	Oiwl E3000	3000	300
	KDC-5	d-e	1700	G-D 800E	800	120
	KDC-6	d-e	5100	Oiwl E3000	3000	300
	KDC-7	d-e	1700	G-D 800E	800	120
	KDC-8	d-e		Oiwl E2000	2000	250
	KDC-6	d-e		Oiwl E2000	2000	250
Parker Drlg	189	d-e	3200	OIME 3000E	3000	300
Santa Fe Drlg	KDC 8	d-e	2800	OIWELL E2000	2000	200
	KDC 9	d-e	2800	Oiwl E2000	2000	200

MIDDLE EAST (Cont'd)

OMAN

• Contractor	Rig No. •	Type Power •	Total HP All Main Mud Pumps •	Drawworks Make And Model •	Total HP Available to Drawworks •	Rated Depth With 4½-in. Pipe, 100 ft. •
Deutsche Tiefbohr	T-17	d-e	2700	Nat 1320UE	1800	200
	T-18	del	3200	Nat 55	1000	110
	T-29	d-e	2600	Nat 1320ME	2000	200
	T-33	del	1600	Nat 55	1000	110
	T-34	del	1800	Idco H1000	950	80
Forex Neptune and/or Affil	12	del	1800	Idco Junior 1200	1400	115
	15	d-e	3200	Idco Super 711	1200	180
	57	del	2000	Oiwl 760	1000	150
	58	del	2000	Nat 80B	1000	157

QATAR

• Contractor	Rig No. •	Type Power •	Total HP All Main Mud Pumps •	Drawworks Make And Model •	Total HP Available to Drawworks •	Rated Depth With 4½-in. Pipe, 100 ft. •
Deutsche Tiefbohr	T-6	del	500	Idco H1000	910	80
Santa Fe Drlg	131					
	89	d-e	2000	Nat 110UE	1800	160
	93	d-e	1700	Nat 80UE	700	120

SAUDI ARABIA

• Contractor	Rig No. •	Type Power •	Total HP All Main Mud Pumps •	Drawworks Make And Model •	Total HP Available to Drawworks •	Rated Depth With 4½-in. Pipe, 100 ft. •
Blocker Drlg-Alice	19	del	1475	Cbot 2346	950	100
	7	del	1400	Cbot 900	950	100
Loffland Bros	126	d-e	3200	MC U1220EBD	2000	250
	127	d-e	3200	MC U1220EBD	2000	250
	128	d-e	3200	MC U1220EDB	2000	250
Santa Fe Drlg	101	d-e	2600	Nat 110UE	1500	160
	104	d-e	3400	Nat 1100UE	1500	160
	106	d-e	2000	Nat 110UE	1800	160
	67	d-e	2400	Nat 1320DE	3400	200
	70	d-e	2000	Nat 1320DE	3400	200
	90	d-e	2000	Nat 1320DE	2000	200

UNITED ARAB EMIRATES

• Contractor	Rig No. •	Type Power •	Total HP All Main Mud Pumps •	Drawworks Make And Model •	Total HP Available to Drawworks •	Rated Depth With 4½-in. Pipe, 100 ft. •
Forex Neptune and/or Affil	21	d-e	3200	G-D 2100E	2300	254
	32	d-e	3200	G-D 1100E	1500	180
	34	d-e	3200	G-D 1100	1500	180
	40	d-e	2000	Nat 80UE	1000	157
	56	del	2000	Nat 80B	1000	157
Geoprosco Intl	38	del	725	Idco H800	725	100
	42	d-e	725	Idco ED800	1000	100
	43	d-e	700	Idco ED800	1000	100
Santa Fe Drlg	121	d-e	3400	Oiwl 2000E	3000	250
	139	del	3400	Oiwl E2000	2000	250
Sedco Inc	59	del	2800	Oiwl 860	2200	160
	95	d-e	3400	Nat 1320UE	2000	200
	96	del	3400	Oiwl E2000	2000	200
	97	del	2700	Oiwl 860	2200	160
Sonat Offshore Drlg	14	del		C-E C2 Type II		200
SAIPEM	5827	d-e	3200	Idco E2100	2000	200
	5828	d-e	3200	Idco E2100	2000	200
	5887	d-e	3200	Nat 1625	3000	250

SOUTH AMERICA

ARGENTINA

• Contractor	Rig No. •	Type Power •	Total HP All Main Mud Pumps •	Drawworks Make And Model •	Total HP Available to Drawworks •	Rated Depth With 4½-in. Pipe, 100 ft. •
Compania Naviera Perez Companc	1	del	1400	Crdw J450	700	69
	2	del	1400	Crdw J450	700	69
	29	del	1600	G-D 700	700	100
	3	del	1400	Crdw J450	700	69
	36	del	1600	G-D 800	1050	120
	37	del	1400	Crdw KB210	350	59
	4	del	1400	Crdw J450	700	69
	42	del	1000	G-D 700	1700	100
	5	del	1400	Crdw KM250	350	59
	6	del	1400	Crdw KM250	350	59
Rio Colorado SA	E-101	del	1250	MC U36A	700	100
	E-102	del	1250	MC U36A	1000	100
	E-103	del	1250	MC U36A	1000	100
	E-105	del	1000	C-E GC350	800	90
	E-107	del	1800	Nat 100N	1500	160
	E-108	del	1250	Nat	800	100
	E-109	del	1250	Nat N75	1500	110
	E-110	del	1000	Idco H40	500	80
	E-111	del	1500	G-D 800DW	900	110
	E-112	del	1000	Idco H40	500	85
	E-113	del	1600	G-D 800DW	1200	120

SOUTH AMERICA (Cont'd)

ARGENTINA (Cont'd)

• Contractor	Rig No. •	Type Power •	Total HP All Main Mud Pumps •	Drawworks Make And Model •	Total HP Available to Drawworks •	Rated Depth With 4½-in. Pipe, 100 ft. •
Rio Colorado SA	E-125	del	880	Idco H37	500	65
	E-126	del	2600	Nat 1320UE	2000	200
	E-127	d-e	2660	G-D 1500E	2000	200
	E-128	d-e	1140	Idco E525	1000	100
	E-129	del	1600	Nat 75	1000	100
	E-130	del	1320	Idco H40	450	80
	E-132	del	1320	Idco H40	550	80
	E-134	d-e	2600	Nat 1625DE	3000	250
	E-137	del	1900	Idco H1200	2500	150
	E-301	del	230	Crdw KB500	380	120
	E-302	del	160	W-M 1538B	380	110
	E-307	del	160	Idco H-25	380	100
	E-309	del	230	Idco KB210A	280	100
	E-310	del	230	Crdw KB200C	380	100
	E-317	del	550	Crdw KB200C	370	100
	E-318	del	550	Idco H30	230	110
	E-319	del	560	Idco H30	230	110
	E-320	del	550	Idco H30	230	110
	E-323	del	550	Idco H30	230	110
	112	del		Idco H40		65
	146	del				150
	303	del		W-M 1538B		110
	304	del		W-M 1538B		110
	305	del		Wils Super 38		110
	306	del		Crdw K210A		100
	308	del		Crdw K200		100
	311	del		Wils Super 38		110
	312	del		Crdw KB150		90
	321	del		Idco M20D		85
	322	del		Idco M20D		85
	324	del		Idco M20D		85
	325	del		Idco H25		95
	326	del		Crdw KB210A		100
	327	del		Idco H20		85

BOLIVIA

• Contractor	Rig No. •	Type Power •	Total HP All Main Mud Pumps •	Drawworks Make And Model •	Total HP Available to Drawworks •	Rated Depth With 4½-in. Pipe, 100 ft. •
Helmerich & Payne Rasco	11	d-e	1600	HS1500	1500	180
	9	d-e	1600	HS1500	1500	180
Rio Colorado SA	E-104	del	1000	Idco H525	800	100

BRAZIL

• Contractor	Rig No. •	Type Power •	Total HP All Main Mud Pumps •	Drawworks Make And Model •	Total HP Available to Drawworks •	Rated Depth With 4½-in. Pipe, 100 ft. •
Compania Naviera Perez Companc	45	d-e	2600	Idco E1700	1700	152
	46	del	1500	G-D 500M	700	100
Parker Drlg	132-HH/20	del	1500	OIME TBA2000	1700	200
	134-HH/22	del	1500	OIME TBA2000	1700	200
	151-HH/34	del	1500	OIME TBA2000	1700	200
	185-HH/40	del	2000	OIME TBA2000	2000	200
Rio Colorado SA	E-119	del	1650	C-E A800	1600	120
	E-120	del	2000	S/B N95A	2250	140
	E-121	d-e	2900	S/B N95A	2000	160
	E-122	d-e	2900	S/B N95A	2000	160
	E-123	d-e	2800	Nat 1320E	2000	200
	E-124	d-e	2800	Nat 1320E	2000	200

COLOMBIA

• Contractor	Rig No. •	Type Power •	Total HP All Main Mud Pumps •	Drawworks Make And Model •	Total HP Available to Drawworks •	Rated Depth With 4½-in. Pipe, 100 ft. •
Helmerich & Payne (Colombia)	10	d-e	1600	HS1500	1500	180
	7	d-e	2000	HS1500	1500	180
Parker Drlg	104	del	1400	Nat 50A	1275	100
	110HH/9	del	1500	OIME	1700	170
	158	del	1200	Nat 80B	1700	150
	197-HH/43	del	3000	OIME TBA2000	2000	200
	209	del	750	Nat 50	750	100
	216	del	3200	OIME 2000	3200	250
	219	del	3200	OIME 2000	3200	250
Rio Colorado SA	135	del	1100	Idco H40	600	80
	144	del		S/B N85		140

ECUADOR

• Contractor	Rig No. •	Type Power •	Total HP All Main Mud Pumps •	Drawworks Make And Model •	Total HP Available to Drawworks •	Rated Depth With 4½-in. Pipe, 100 ft. •
Helmerich & Payne Del Ecuador	12	d-e	1600	HS1500	1500	180
	18	del	600	Coop LTO550	600	60
Parker Drlg	135	del	1400	OIME TBA2000	1400	150
	159	del	2200	Oiwl 76	1560	150

SOUTH AMERICA (Cont'd)

PERU

• Contractor	Rig No. •	Type Power •	Total HP All Main Mud Pumps •	Drawworks Make And Model •	Total HP Available to Drawworks •	Rated Depth With 4½-in. Pipe, 100 ft. •
Belco Petr	2	del	1000	S/B H4210	700	80
	3	del	1000	Nat 55	700	90
	4	del	1000	Nat 80B	1600	120
	6	del	1000	S/B DH4610	1000	120
	7	del	850	C-E A1100	1600	140
	8	del	850	C-E DH4610	1000	100
Blocker Intl	21	del	550	Idco H37	456	70
	22	del	550	Idco H37	456	70
	23	del	560	Idco H37	456	70
	24	del	550	Idco H37	456	70
	31					150
	34					150
Parker Drlg	107-HH/4	del	1200	OIME	1700	150
	108-HH/5	del	1500	OIME	1700	170
	127-HH/15	del	1500	OIME TBA2000	1700	200
	131-HH/19	del	1500	OIME TBA2000	1700	200
	144-HH/30	del	1500	OIME TBA2000	1700	200
	145-HH/31	del	1500	OIME TBA2000	1700	200
	154-HH/35	del	1500	OIME TBA2000	1700	200
	155	del	1500	OIME TBA2000	1700	200
	206	del		OIME TBA2000	2000	200
	207	del	2000	OIME TBA2000	2000	200
Rio Colorado SA	E-106	del	1000	C-E GC350T	1000	90
	E-114	del	900	Crdw KT250	500	30
	E-115	del	900	Crdw KT250	500	60
	E-116	del	900	Crdw KT250	500	60
	E-117	del	900	Crdw KT250	500	60
	E-118	del	600	I-R RT5	200	30
	313	del		Crdw KB150		90
	314	del		Crdw KB150		90
	315	del		Crdw KB150		90
	316	del		Crdw KB150		90

TRINIDAD

• Contractor	Rig No. •	Type Power •	Total HP All Main Mud Pumps •	Drawworks Make And Model •	Total HP Available to Drawworks •	Rated Depth With 4½-in. Pipe, 100 ft. •
Skinner Marine Oper	15	del	280	Cbot 280 CA Rocket	3000	
	16	del	450	Cbot 1267	300	40
	17	del	1100	Oiwl 660	840	90
	18	d-e	2000	Oiwl 840E	2000	180

VENEZUELA

• Contractor	Rig No. •	Type Power •	Total HP All Main Mud Pumps •	Drawworks Make And Model •	Total HP Available to Drawworks •	Rated Depth With 4½-in. Pipe, 100 ft. •
Helmerich & Payne CA	14	del	600	Idco H37	400	60
	17	del	600	Coop LTO550	600	60
	19	del	600	Coop LTO550	600	60
	20	del	600	Coop LTO550	600	60
	21	del	600	Coop LTO550	600	60
	28	del	1500	Nat 110	1500	180
	3	del	600	Idco H37	600	60
	30	del	1200	Idco H525	1200	100
	31	del	1200	Idco H525	1000	100
	6	del	300	Idco H44	400	50
	67	del	1500	Nat 110	1500	180
Loffland Bros	14	del	700	MC U36A	785	90
	24	d-e	2000	Nat 100E	2000	150
	41	del	2000	MC U814C	2000	200
	54	d-e	2900	MC U1220EB	3300	280
	61	del	580	Idco H525	568	65
	62					
	68	d-e	3200	MC U1220EB	3300	280
	94	d-e	2000	MC U20E	1900	180
Santa Fe Drlg	110	d-e	2000	Nat 1320UE	2000	200
	115	d-e	2000	Nat 1320DE	3400	200
	118	d-e	2800	Oiwl E2000	2000	200
	125	del	800	Hoop GXTA	450	60
	129	del	1700	G-D 500M	650	90
	15	del	800	Idco 525	600	90
	16	del	600	Nat T32	250	50
	2	del	1700	Nat 130	1800	200
	20	del	800	Idco H40D	350	70
	21	del	1200	MC U814B	1800	200
	22	del	350	Idco H35	350	50
	24	del	360	Idco H35	350	50
	8	del	2200	Nat 130	1800	200
	9	del	1850	Nat 130	1800	200

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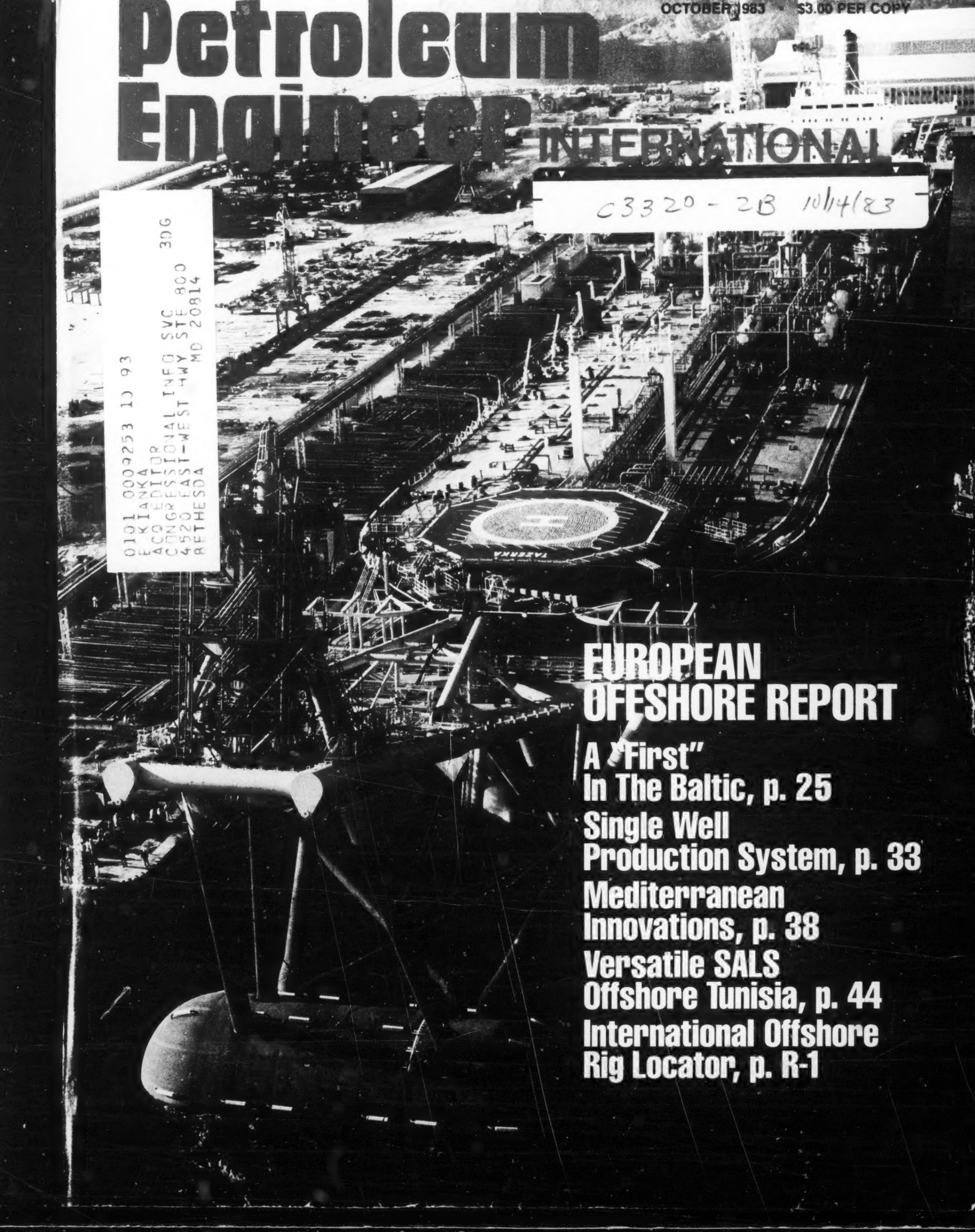

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of methods for engineering/
operating people

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ABOUT THE COVER: Shell Tunirex's converted tanker is about to leave port after modification and before mating with the already installed riser in the Tazerka field offshore Tunisia (see p. 44).

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33 **BP's SWOPS Nearing Reality**
The system consists of a tanker-like vessel connected to a subsea wellhead by a riser. Production is stored on board until the vessel is full. Then, the riser is retrieved and the vessel moves to shore for offloading.

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Engineer® INTERNATIONAL

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R-1 International Offshore Rig Locator

Mechanical specifications, ratings, locations, status, etc., are presented for the almost 1,000 contract rotary drilling rigs operated by independent offshore drilling contractors throughout the Free World.

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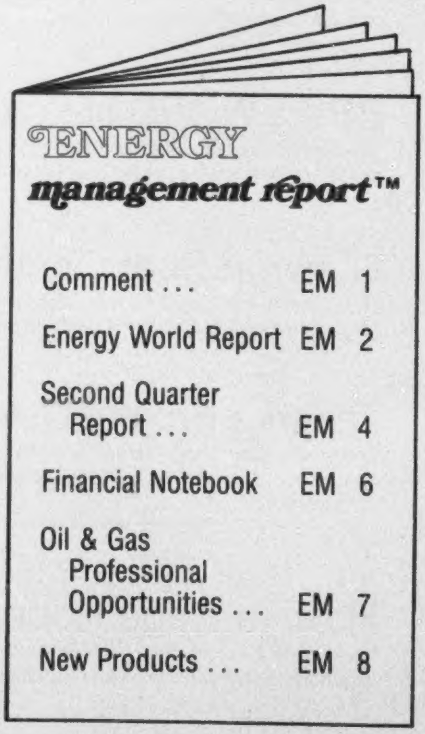

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Engineering Profits into Energy Operations

During the mid-August to mid-September period covered by this report, Texas picked up 75 active rigs – an increase that eclipsed by two the overall U.S. effort. Wyoming and California both gained 13 rigs during the month, but Oklahoma was off 14 rigs and Louisiana was down by 11. Offshore drillers around the country slumped by nine rigs during the month. Canada's offshore drillers, on the other hand, were marvels of consistency.

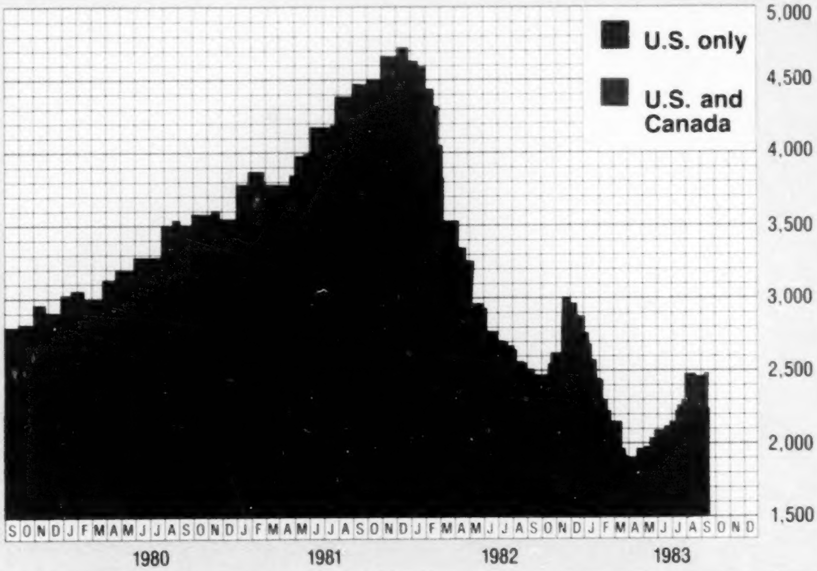
With 15 weeks left in the year, as of mid-September, the U.S. rig count is averaging 2,113.8 active rigs per week. That means that the revised goal of 2,285 average rigs for 1983 is unlikely to be met because it would take an extraordinary effort during which the rig count would have to average 2,707 for slightly longer than 3 months.

Nevertheless, U.S. drillers are continuing their turnaround that has seen Hughes Tool Co.'s active rotary rig count climb each week since July 11.

Rotary rigs actually making hole in United States & Canada

As Reported To International Association Of Drilling Contractors By Hughes Tool Co.

	Aug. 22, 1983	Aug. 29, 1983	Sept. 6, 1983	Sept. 12, 1983
Alabama				
Land	13	13	16	15
Inland Waters	3	3	3	2
Offshore	1	1	1	1
Alaska				
Land	8	9	9	10
Offshore	5	5	5	4
Total	13	14	14	14
Arkansas	25	25	27	27
Arizona	0	0	1	1
California				
Land	81	84	90	94
Offshore	27	26	26	27
Total	108	110	116	121
Colorado	63	66	65	63
Florida				
Land	5	5	5	4
Offshore	1	1	1	1
Total	6	6	6	5
Hawaii	1	0	0	1
Idaho	2	2	3	3
Illinois	73	72	69	68
Indiana	7	6	5	5
Kansas	128	121	119	124
Kentucky	10	9	7	7
North Louisiana	33	31	30	28
South Louisiana				
Inland Waters	46	47	46	46
Land	80	74	75	81
Offshore	109	109	102	102
Total	268	261	253	257
Michigan	34	36	36	40
Mississippi	28	26	26	26
Montana	21	18	15	23
Nebraska	8	5	6	6
Nevada	1	1	1	1
New Mexico	51	54	52	56
New York	11	9	9	9
North Dakota	36	31	34	31
Ohio	51	50	45	43
Oklahoma	267	255	261	253
Pennsylvania	26	30	32	33
South Dakota	3	1	1	1
Texas				
Offshore	44	46	43	43
Inland Waters	7	7	6	7
Dist. 1-S. Central Tex.	10	10	21	21
Dist. 2-Middle Tex. Coast	38	41	32	34
Dist. 3-Upper Tex. Coast	97	94	96	97
Dist. 4-Lower Tex. Coast	77	85	90	89
Dist. 5-Northeast Tex.	28	26	24	21
Dist. 6-Far Northeast Tex.	74	77	78	79
Dist. 7B-N. Central Tex.	45	49	54	52
Dist. 7C-W. Central Tex.	57	51	50	54
Dist. 8-Far West Tex.	104	116	126	138
Dist. 8A-West Tex.	54	58	59	61
Dist. 9-North Tex.	74	77	77	79
Dist. 10-Tex. Panhandle	43	47	49	52
Total	752	784	805	827
Utah	37	39	40	37
Virginia	1	1	3	3
Washington	2	1	1	1
West Virginia	27	28	30	30
Wyoming	97	107	108	113
Total U.S.	2,174	2,185	2,210	2,247
Canada	263	245	218	206
Canada-Offshore	17	17	17	17
U.S. and Canada	2,454	2,447	2,445	2,470



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New Generation Of Semis Improves Offshore Drilling Operations

by T. V. Rodnight, *Senior Project Engineer, KCA Engineering Ltd., London, UK*

The latest generation of semisubmersible drilling units (SSDUs) is designed with improved structural strength, higher variable deck load, deeper water depth capability, and a greater degree of self-sufficiency.

The SSDU is considered the most suitable offshore drilling unit for operations in harsh environments due to its excellent motion characteristics (Table 1). These are achieved at the expense of variable deck loading, so a satisfactory compromise has to be reached between the two factors.

Rules and Regulations

The influence of governmental classification authorities on the design of the SSDU and its equipment systems has steadily increased as more knowledge and experience in SSDU operation are obtained.

Rules and regulations for North Sea operations are divided into two groups: (1) those issued by the classification societies (ABS, DNV, Lloyds, etc.) which apply to the design and construction of the mobile drilling unit, and (2) those issued separately by the governmental authorities (UK Departments of Energy and Trade, Norwegian Directorates, etc.) which relate to the suitability of the mobile drilling unit to operate in areas within a country's jurisdiction.

The purchaser of a new SSDU normally stipulates approval by one classification society and at least two sets of different governmental regulations to improve operational flexibility. There are differences and in some cases contradictions in these regulations, causing potential problems and delays during construction.

Investigative work into offshore accidents – the structural failure of the semisubmersible Ocean Prince, blowout on the Ekofisk production platform, grounding of semisubmersible Deep Sea Driller, capsize of the semisubmersible Alexander Kielland – has noticeably increased new rules and regulations.[1] In most cases, existing mobile drilling units are expected to comply within a specified time period.

As a result, rig owners face a dilemma – to either upgrade the unit at great cost (estimated $5 to $10 million for an SSDU to meet 1981-1982 Norwegian regulations) or move it to another area where the unit is able to comply with the appropriate rules. During the last decade many of the older SSDUs have left the North Sea for Asian and African waters due to the introduction of new rules and regulations.

Environmental Criteria

Environmental criteria used in the design of SSDUs have become gradually more severe as drilling operations extend into deeper waters and more remote locations. These criteria need to be determined early in the design phase since they are required to establish motion characteristics, structural strength, mooring capability, and specifications for equipment systems.

Usually SSDUs are designed for a general area of operation – for example, the northern North Sea, Far East, or Gulf of Mexico. Therefore, they can be divided into groups which satisfy identical or very similar environmental criteria.

The advantages or disadvantages of an SSDU within a particular group become more apparent when the water depth capability, variable deck load, and equipment specifications are reviewed. Construction costs for the various types of mobile drilling units are shown in Table 2.

Motion Characteristics

The efficiency of offshore drilling operations is affected by an increase in unit motions until a point is reached where continued operations would be considered unsafe. Ultimately, failure to maintain position due to dragging of anchors, broken mooring lines, or insufficient thruster power would result in a disconnect procedure from the BOP stack after closing the well.

Optimization of SSDU motions is an important part of the design phase. The following factors all have a significant effect on SSDU motions:[2]

- Shape of pontoon hulls.
- Spacing between pontoon hulls.

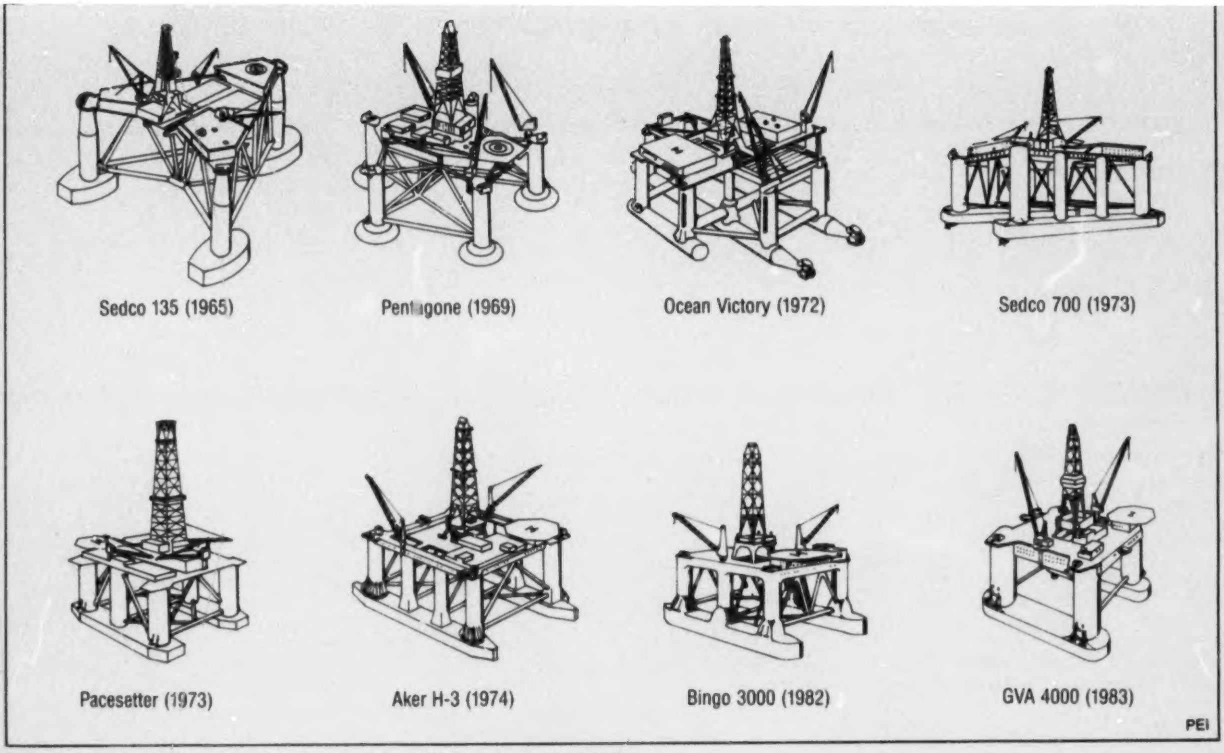
Sedco 135 (1965)
Pentagone (1969)
Ocean Victory (1972)
Sedco 700 (1973)
Pacesetter (1973)
Aker H-3 (1974)
Bingo 3000 (1982)
GVA 4000 (1983)

Fig. 1. Various types of semisubmersible drilling units (1965-1983).

- Number of columns.
- Spacing between columns.
- Column diameters.

Heave is the principal motion to affect SSDU operations, followed by roll and pitch. Heave motions are accommodated by motion compensation systems – that is, drill string compensator, riser tensioners, and guideline tensioners. Roll and pitch motions are accommodated by ball or flex joints, located under the drill floor and on the lower marine riser package. Surge, sway, and yaw motions are contained by the mooring or dynamic positioning systems.

Limiting SSDU motion figures for normal drilling operations are approximately ±6 ft for heave, ±3° roll, and ±3° pitch. For an SSDU these figures could be reached in wave heights of 40 ft, and for drillships 10- to 20-ft waves, depending on heading. Motion criteria for more difficult operations, such as the running of BOP stacks or casing, are considerably less.

Variable Deck Load

Variable deck load (VDL) is normally the principal design parameter for an SSDU. It is also an important factor in the selection of a mobile drilling unit. VDL usually is defined as the weight which can be carried at a point located a small distance above the main storage area – typically 5 ft above the pipe racks.

Because of the attraction of the high VDL, designers often present their figures in the most optimistic manner. The VDL can only be confirmed after the inclining test, and frequently the design VDL bears little relationship to the actual figure. Usually the difference is caused by a combination of underestimating the lightship weight and a higher lightship vertical center of gravity. Therefore, it is important to ensure that an effective weight control program is carried out during design and construction.

Design studies have been made for SSDUs with a VDL of up to 10,000 metric tons, but these large figures are primarily aimed at the market for semisubmersible floating production facilities, where higher deck load capabilities for the additional process and production equipment are required.

VDL is dependent on the SSDU's stability. However, a conflict in requirements exists, because a large waterplane area is conducive to good static stability and hence VDL, but it is decidedly detrimental to motion characteristics. It is therefore necessary to achieve a satisfactory compromise between VDL and motion characteristics of an SSDU.

The method and assumptions used to calculate VDL may vary. A detailed analysis should be carried out to provide a more accurate comparison. Sometimes the term variable payload is used, which includes consumable items stored below the pipe racks such as fuel oil, bulk materials, and potable water; these additional items produce a variable payload which is greater than the VDL. Mooring system loads are not considered part of the VDL although they affect VDL calculations.

The VDL figure, subject to adequate storage areas, gives a good indication of the self-sufficiency of the SSDU – a factor particularly important to the operator, since a low VDL will require increased resupplying services during operations.

VDL figures should be quoted for three different draughts:

TABLE 1. Comparison of various types of mobile drilling units

	Jackup	Drillship	Semisubmersible
Construction cost	Low to medium	Medium to expensive	Expensive
Water depth capability	Shallow to medium water	Medium to very deep water	Medium to deep water
Transit variable deck load	Fair	Very good	Fair
Operational VDL	Fair	Very good	Good
Motion characteristics	n/a	Poor	Good
Mobilization	Fair	Very good	Good
Setting up on location	Difficult	Fair	Fair

- Transit draught – at pontoon draught to increase transit speed between locations.
- Survival draught – improved stability and to allow 100-year wave to pass under deck structure (typically 60 ft for 100-knot wind).
- Operating draught – optimum draught for a combination of good VDL and motion characteristics (typically 70 ft for 70-knot wind).

The survival and transit VDLs are less than the operating draught VDL, because of differing environmental and stability conditions. Several stability calculations should be made between transit and operating draughts to confirm that positive stability is maintained for the range of draughts.

Typical variable loads for a 1,500-ft water depth SSDU are shown in Table 3. Vertical moments should be calculated to compare with the VDL figure as certain loads are located below and above the pipe racks. Figures in brackets represent maximum capacity.

Structural Design

Throughout the development of the SSDU there has been a general trend to simplify the structural design. Some of the early SSDUs

tures when compared with the most recent units (Fig. 1).

The structural design of today's SSDU has been simplified by:

- Reduction in number of displacement hulls or pontoons.
- Fewer brace members and nodal joints.
- Simpler column-to-pontoon connections.
- Simpler brace connections.
- Modular deck structures.

Two longitudinal pontoons with four, six, or eight columns supporting the main deck structure has become the universal design for SSDUs built over the last 10 years.

Some semisubmersible designs have deleted the horizontal braces tying the pontoons together at the column base level to reduce the drag at transit draught and wave slamming forces on the horizontal braces. This particular design feature has not received widespread approval because of excessive sagging forces occurring at deck structure level.

The structural design of SSDUs

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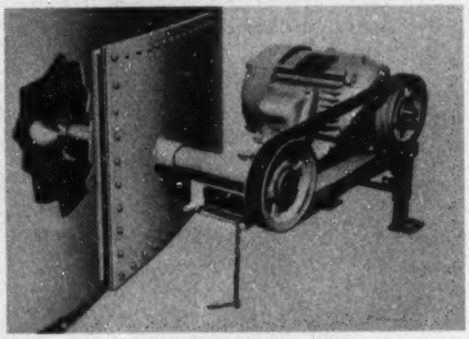

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North Sea have been affected by a number of new rules and regulations principally imposed as a result of the Alexander Kielland accident.

Due to the impact of the lightship weight increases and the new stability rules, many SSDUs, either in operation or in the course of construction, have undergone major structural modifications to enhance their VDL capability. These can take the form of one or more of the following:

- Additional columns.
- Blisters on the column-to-pontoon connections to improve transition stability.
- Blisters on the columns at operating draught.
- Increase in pontoon displacements.

Principal parameters for some of the SSDUs which have or are expected to operate in the North European waters are listed in Table 4. Most of the latest SSDUs are expected to have a lightship weight of between 11,000 and 13,000 metric tons and an operating displacement

The largest SSDUs – the Ocean Ranger design – have a lightship of 16,000 to 22,000 metric tons and an operating displacement of 39,500 to 45,000 metric tons.

Figures for dynamically positioned SSDUs have not been included. It should be noted that such vessels have a water depth capability down to 6,000 ft and an increased displacement to compensate for the additional power generation and propulsion machinery.

A semisubmersible crane vessel, drillship, and jackup are included in Table 4 to illustrate the differences in principal particulars.

Marine Systems

The size of the generation system depends on the power requirements of the propulsion and drilling equipment and miscellaneous services. Electrical load conditions vary between a moored and a dynamically positioned SSDU, since the latter will have a propulsion system load while drilling operations are in progress.

approximately 90% of SSDUs are between 8,000 to 10,000 hp. Dynamically positioned SSDUs have a total power plant of approximately 30,000 to 35,000 hp. The large power plants and thruster propulsion systems are the principal reasons for their increase in lightship and construction costs.

Many of the latest SSDUs are fitted with 6,000- or 6,600-v alternators providing direct power to the propulsion system, and an SCR system providing a lower voltage of 600 or 750 v DC to drive the drilling equipment and mooring system motors. A conventional transformer system is used to provide auxiliary and domestic services. The high-voltage systems (6,000 v) are becoming more standard to reduce the cable sizes, motor dimensions, and installation costs. Such systems, however, require more complex circuit breaker installations and experienced maintenance crews.

The introduction of data management systems (DMS) on SSDUs

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TABLE 2. Mobile drilling unit construction costs (in $1,000,000)

	Jackup		Semisubmersible		Drillship	
Year	Shallow	Deepwater	Moored	Dynamically positioned	Moored	Dynamically positioned
1972	$7-8	$9.5-10.5	$20-25		$10-12	$20-22
1973	$8-11	$11-13	$33.3		$14-20	$25-27
1974	$10-16	$15-16	$34		$16-22	$35-40
1975	$18-22	$20-25	$30-42		$25-30	$40-55
1976	$16-20	$22-28	$50-51	$62	$25-30	$45-60
1977	$17-21	$22-30	$57			
1978	$16-22	$25-35			$59	$80-85
1979	$17-21	$28-44	$60-70		$60-68	$75-85
1980	$20-25	$35-45	$73-75	$120	$90	
1981	$21-30	$51-63	$115-$130	$156	$50-100	
1982	$27-30	$68-75	$100-130	$180	$75-130	$160-180

was successfully pioneered in the mid-1970s. The DMS is now being specified on several of the latest SSDUs.

The DMS is a centralized management system[3] used to control a wide range of machinery, safety, and alarm systems normally operated from the engine control room. Process interface units (PIU) are located at remote stations around the SSDU and are used to collect data or issue command functions via a multiplex data link with the engine control room. A sophisticated DMS can provide remote control monitoring and alarm functioning for such equipment as the power generation, mooring, propulsion, thrusters, ballast, and watertight doors.

Propulsion System

The first SSDUs were not equipped with propulsion systems since they were designed to sit on the seabed in shallow water depths. Rig moves for such units would be carried out with the use of tugs. Today, most SSDUs are classed as ships and are self-propelled. This feature is influenced by the attraction of reduced insurance premium costs.

Typically, modern SSDUs are fitted with either an orthodox in-line propulsion system which uses propellers or varying combinations of thruster units. Thruster units have become more popular in recent years, but problems have been experienced due to the complex control and sealing systems. Even small failures can be extremely expensive repair operations.

The total propulsive horsepower for a twin longitudinal pontoon SSDU has remained unchanged in recent years at approximately 6,000 hp, giving a transit draught speed of approximately 7 knots. Total thruster power of a dynamically positioned SSDU ranges from 24,000 to 32,000 hp.

Transit speed of a SSDU is important when considering the mobilization time and costs for a long voyage — this is one area where the drill-

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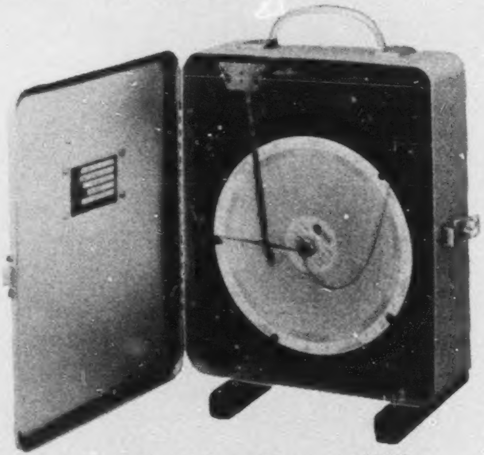

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TABLE 3. Typical variable loads for an SSDU working in 1,500-ft water depth

		Maximum capacity, metric tons	Transit draught, metric tons	Operating draught, metric tons
Topside loads	BOP stack		200	
	Riser system		250	50
	Drill pipe and collars	1,200	300	150
	Casing		100	300
	Drilling tools		100	100
	Sack materials	350	200	200
	Stores		100	100
	Main deck storage tanks	150	100	100
	Diving equipment		150	150
	Testing equipment, labs, etc.		100	100
	Riser and guideline tensions	500		300
	Rotary table load	600		
	Derrick setback load	250		150
	Liquid mud	600		400
Column loads	Bulk materials	1,000	500	500
	Potable water	200	150	150
Mooring loads	Mooring lines	1,800	1,800	400
	Vertical mooring tensions			600

ship has a considerable advantage. A drillship with a propulsion system of approximately 6,000 hp normally would achieve twice the transit speed of an SSDU.

Mooring System

The mooring system is one of the most important factors in the design of an SSDU because it determines the water depth capability and maintains the SSDU on location within acceptable offsets to minimize possible damage to the marine riser and wellhead casing.

There are three types of mooring systems – chain, wire, and a chain-wire combination. During 1982, more than 90% of SSDUs working in North European waters were equipped with chain mooring systems.

A chain-wire combination mooring system is designed to further improve water depth capability by employing wire at the SSDU end to increase the mooring length. This feature minimizes weight increases, but requires complex drive and spooling units.

The design water depth capability of moored SSDUs working in the North Sea has increased from 600 ft in the early 1970s to approximately 1,500 ft for the latest units. Several of the SSDUs built in the mid-1970s were upgraded from 600 ft to 1,000 ft. This was achieved by increasing the chain lengths from approximately 3,500 to 4,500 ft and modifying the chain lockers.

While it is possible to design larger and better mooring systems, the practical aspects of running and retrieving moorings in deep waters and harsh environments should not

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TABLE 4. Principal parameters for various types of mobile drilling unit designs

Vessel type	Design series and year of introduction	Lightship, metric tons	Operating displacement, metric tons	Design variable deck load, metric tons	Number of pontoon hulls	Number of columns	Maximum design water depth capability, ft	Mooring system
Semi-submersible drilling units	Sedco 135 (1965)	9,500	14,600	1,250	3	3	600-800	9 × wire or chain
	Pentagone (1969)	10,000	17,600	2,100	5	5	600-1,200	10 × wire
	Ocean Victory (1972)	10,000	23,000		4	12	600-1,000	8 × chain
	Sedco 700 (1973)			3,000	2	8	1,000-2,000	8 x chain, or DP* and 6 × chain
	Pacesetter (1973)			3,000 +	2	6	650-2,000	8 × wire, chain or chain-wire
	Aker H-3 (1974)	10,600	19,600	2,200	2	8	600-1,500	8 × chain
	Bingo 3000 (1982)		25,000	3,000 +	2	6	1,500	8 × chain
	GVA 4000 (1983)	13,350	26,000	4,000	2	4	1,500-2,000	8 × chain or chain-wire
Semi-submersible crane vessel	Heerema (3000 + 2000 s. t. cranes) (1978)	46,500	105,000	7,250	2	6		12 × wire
Drillship	IHC gusto (1972)	10,300	18,400	4,600	1	-	1,500-6,000	DP, or 8 × wire and DP
Jackup	Marathon LeTourneau 116-C (1976)	5,500		1,800	1	3 legs	300	none

*DP = dynamic position

Note: These figures are for guidance only; for more precise information, direct contact with the rig designer is recommended.

be understated. Operations in such conditions take longer periods of time and require larger workboats and reliable windlass braking systems.

Many of the early SSDUs were equipped with wire mooring systems, but chain is strongly favored for North Sea environments because:

- The chain system is considered more robust and durable.
- The chain catenary shape enables chain to embed into the sea bottom and improve overall anchor holding capability.

A wire mooring system, however, offers reduced weight (therefore improved VDL), reduced cost, and better mooring characteristics in shallower waters.

Some of the latest SSDUs equipped with wire or the wire-chain mooring systems have located the wire storage reels in the pontoons or lower columns, which improves the VDL figures due to the low centers of gravity.

Many problems were experienced with mooring systems during the last decade of SSDU operations in the North Sea. These included chain and anchor failures, broken dog clutches and bull gears, fairleader foundation welding problems, and incorrect design of fairleader and gypsy pockets. Recent improvements include the use of hydraulic power, torque converters, better braking systems, and removal of wildcats. The new regulations, design features, and manufacturing techniques are obviously aimed at improving the reliability of mooring systems.

Mooring systems can be improved by specifying a higher quality chain. During the last few years, chain manufacturing techniques have progressed from the normal oil rig quality or similar Grade 3, to provide either an arctic or Grade 4. The arctic grade provides Charpy impact test results at −60 C, while Grade 4 provides approximately 35% improvement in tensile yield values.

Dynamic Positioning

Dynamic positioning, also known as automatic station-keeping, is a system designed to keep a drilling unit on location without the use of a mooring system. It usually consists of three independent reference systems which are linked via computers to the thruster units.

The design station-keeping capability of the dynamic positioning SSDUs is less than that of a moored-up SSDU. Dynamic positioning units are believed to be capable of maintaining position in wind speeds of approximately 65 knots, whereas moored-up units operating in the North Sea are designed to remain on location in wind speeds of 100 knots.

Installation of a dynamic positioning system on a mobile drilling unit effectively removes the water depth constraints imposed by mooring systems. A dynamically positioned drilling unit is equally effective in water depths of 1,000 or 6,000 ft. Specifications for a dynamic positioning system on an SSDU suitable for the North Sea would require additional on-board support crew and would result in an estimated 300% increase in propulsion and generation power, about a 200% increase in daily fuel consumption, and about a 30% increase in construction costs.

Operating mobile drilling units using a dynamic positioned system is more difficult in shallow to medium water depths due to the need to maintain position within acceptable offsets (approximately 6% of the water depth). A few drilling units are equipped with mooring systems to give additional water depth flexibility.

New mooring rules from the Norwegian authorities permit the use of propulsion and thruster units to complement the mooring system – by directing the propulsion thrust against the environmental forces to reduce the forces in the mooring lines. A future possibility is that a semiautomatic dynamic positioning system with joystick control could be used for severe weather situations.

Drilling Equipment

The drilling depth rating for modern SSDUs has remained unaltered at either 20,000 or 25,000 ft – sufficient for most offshore wells which are drilled to target depths of between 7,000 to 14,000 ft. Few significant developments have emerged over the last decade in drill floor equipment apart from the introduction on a few SSDUs of pipe racking systems and iron roughnecks.

Constant weight on the drill bit is achieved by the drill string compensator (DSC) which normally is located in vertical guiderails in the derrick. To increase well depth capability and the ability to land heavier BOP stacks, several of the new SSDUs are being equipped with larger DSCs (600,000-lb motion compensation and 1,400,000-lb lockdown load).

Operations in deeper waters require larger top tensions to support the riser system from collapsing or buckling. To achieve the necessary support, the latest SSDUs are equipped with 8 to 12 8,000-lb capacity riser tensioners, which are complemented with buoyant riser joints. Riser flotation devices normally are fitted for water depths in excess of 1,000 ft.

Running and retrieval of the BOP stack is a difficult operation, especially in bad weather, and the drill crew can be exposed to hazardous situations. Many of the latest SSDUs have been fitted with sophisticated transporter-guidance systems to carry the BOP stack as a complete unit. For ideal retrieval operations, BOP handling systems should be designed to safely restrain and land the BOP stack when it is hanging from under the drill floor.

Control of the BOP stack on the sea floor is achieved by a hydraulic hose bundle. In water depths in excess of 2,000 ft, electronic multiplex systems are used to control the BOP hydraulic system, minimizing control signal times.

SSDU Capabilities

During the last decade, the semisubmersible drilling unit has grown by the largest percentage of all the various types of mobile drilling units, because of its good motion characteristics and water depth capability. The twin pontoon hull

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with a rectangular deck structure supported by columns has become the standard design for SSDUs since the mid-1970s. It offers simple construction, good transit speed, and optimum space utilization.

A variable deck load of between 2,500 and 3,500 metric tons is the industry standard for offshore exploration. Designs with larger variable deck loads are only economically viable as floating production platforms.

Lightship weight and center of gravity should be carefully controlled during design and construction of an SSDU. Most new SSDUs have been designed to operate in North Sea environments, and will be equipped with mooring systems designed for 1,500-ft water depths.

No serious problems are foreseen in designing SSDUs suitable for operations in water depths of 6,000 ft. Such designs would require dynamic positioning systems which increase the unit's costs and complexity.

In recent years SSDUs have been operating in colder and harsher environments. The latest SSDUs are being designed with lower design temperatures, improved mechanical handling systems, and increased weather protection.

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About the Author

Tony Rodnight is a senior project engineer with KCA Engineering Ltd. in London and has worked in the international offshore industry for 10 years. A graduate of Britain's Newcastle University, where he gained a BSc honors degree in naval architecture, he started his engineering career with Vickers Shipbuilders.

Since joining KCA in 1980, Rodnight has been closely involved in the design and development of a heavy-duty semisubmersible drilling unit for operations in hostile conditions and supervision of the engineering, construction, and the commissioning of KCA's dynamically positioned drillship, Polly Bristol. He is currently providing advisory services to British Shipbuilders during the construction of a GVA 4000 semisubmersible drilling unit. Rodnight is a Chartered Engineer and a Member of the Royal Institution of Naval Architects. ■

a 10/64-in. choke with 11,500 psi tubing pressure. Calculated open flow potential is 66 MMcfd. Completion is in a Second Britt sandstone with perforations at 19,262-82 ft.

In Texas, meanwhile, the company completed a new field discovery in its Matagorda Island Block 629 field offshore Calhoun County. The NW-4 No. 4 well tested 3.7 MMcfd of gas through a 16/64-in. choke with 2,008 psi tubing pressure. Perforations are at 5,634-54 ft in a Lower Miocene gas sand.

African Drillers Pace Free World Slump

An 11% decline in Free World drilling activity during the July 1982 to July 1983 period was led by Africa's loss of 81 active rigs – 50 of which can be traced to Algeria.

Other big losers during the period include Europe, down 60 rigs, and Latin America, off 65 rigs. The Far East, on the other hand, picked up 26 active rotaries and the Middle East gained two.

The International Rotary Rig Report, prepared each month by Hughes Tool Co., reflects a loss of 194 rigs during the July-to-July period for an average of 16 rigs per month. The decline from June 1983 to July 1983, however, was only six rigs.

International Rotary Rig Report prepared by Hughes Tool Co.

(Figures in parentheses indicate how many of each country's rigs are offshore rigs.)

	July 1982	June 1983	July 1983
Africa			
Algeria	90	50	40
Angola	13(10)	12(10)	14(12)
Benin	1(1)	1(1)	1(1)
Cameroun	7(6)	5(5)	5(5)
Chad	1	0	0
Gabon	11(9)	8(8)	7(7)
Guinea	1(1)	0	0
Ivory Coast	4(4)	2(2)	2(2)
Libya	28(1)	19(1)	27(2)
Morocco	5	8	5
Niger	1	0	0
Nigeria	30(13)	18(7)	18(7)
Rep. of Congo	7(6)	5(5)	4(4)
Rep. of Zaire	2(1)	1	1
Senegal	1	0	0
Sierra Leone	1(1)	0	0
South Africa	2(2)	2(2)	2(2)
Sudan	2	5(1)	5(1)
Tanzania	0	1	1
Tunisia	11(3)	7	5(2)
	218(58)	144(42)	137(45)
Europe			
Austria	8	10	9
Denmark	2(2)	5(4)	5(4)
France	19	15(1)	19(1)
Germany	31	24	24
Greece	4(2)	3(1)	3(1)
Holland	23(15)	16(10)	16(10)
Ireland	1(1)	3(3)	3(3)
Italy	43(7)	27(9)	20(5)
Norway	12(12)	9(9)	10(10)
Portugal	1	1	1
Spain	11(5)	6(3)	8(3)
Switzerland	1	0	0
United Kingdom	59(58)	41(38)	41(38)
Yugoslavia	25	25	21(2)
	240(102)	185(78)	180(77)
Far East			
Bangladesh	7	2	2
Brunei	8(6)	10(7)	10(7)
Burma	33	41(1)	41(1)
India	51(11)	56(14)	56(14)
Indonesia	82(33)	90(23)	91(24)
Japan	19	18(2)	23(2)
Malaysia	12(12)	9(9)	9(9)
Pakistan	16	17	17
Philippines	15(3)	8	9
Taiwan	6	11(1)	11(1)
Thailand	8(5)	15(8)	14(7)
	257(70)	277(65)	283(65)
Latin America			
Argentina	62(1)	75	80
Barbados	1	1	1
Bolivia	12	8	8
Brazil	95(30)	85(32)	81(31)
Chile	7(3)	6(3)	6(3)
Colombia	26	16	15
Costa Rica	0	1	1
Ecuador	5(1)	5	4
Guatemala	3	1	1
Mexico	194(23)	189(27)	188(26)
Peru	24(6)	16(6)	17(6)
Trinidad	14(6)	8(3)	8(3)
Venezuela	71(18)	40(11)	41(11)
	516(88)	451(82)	451(80)
Middle East			
Abu Dhabi	42(24)	39(26)	34(23)
Bahrain	1	1	2
Dubai	3(2)	4(4)	7(5)
Egypt	39(25)	38(22)	31(17)
Iran	0	7(1)	19(2)
Iraq	5	25	25
Jordan	0	3	3
Kuwait	5	6	5
Oman	14(2)	10	8
Qatar	6(3)	5(3)	4(2)
Ras Al Khaimah	1(1)	0	0
Saudi Arabia	26(10)	25(11)	29(14)
Sharjah	3	1	1
Syria	15	14	14
Turkey	43	23	24
Umm Al Qaiwain	1	1	1
	205(67)	202(67)	207(63)
South Pacific			
Australia	36(9)	23(12)	18(6)
Fiji	1	0	0
New Zealand	1	2	2
Papua New Guinea	0	2(1)	2(2)
	38(9)	27(13)	22(8)
Totals	1,474 (394)	1,286 (347)	1,280 (338)

Relief Well Is Producer

A relief well drilled by Crawford Energy Inc. to control its Kyle No. 1 discovery well, which blew out in Hardeman County, Texas, in March 1982, has been converted to a significant producer.

The well, Kyle No. 3, located 10½ miles northeast of Quanah, tested 471 b/d of oil through a 14/64-in. choke with flowing tubing pressure of 1,550 psi.

The initial well, Kyle No. 1, blew out during a drill stem test while drilling below 8,500 ft in the Mississippian formation. It burned for about 2 weeks.

Henry Energy Tests Texas Discovery

Henry Energy Corp.'s discovery well in Cooke County, Texas, flowed 264 b/d of oil through a 16/64-in. choke from a zone at 2,733-82 ft.

"Working Man's Show" Set For October 19

This year's Louisiana Gulf Coast Oil Exposition, the "working man's oil show", is scheduled to be held October 19 through 22 at the Blackham Coliseum in Lafayette, La.

Jack Eaton of Auto-Comm Engineering Corp., and chairman of this year's show, says that outside exhibit space has been added to accommodate what is expected to be "another sellout year" for the biennial event. Cochairman of Lagcoe is Jerry Artigue, Dynamic Exploration Inc., and Granvel Salmon is the executive director and treasurer. Sally Ware is executive secretary.

The 1983 show is the 15th of the Gulf Coast oil expositions, which date back to 1955. The show is held every other year so as not to conflict with the Permian Basin Oil Show in Odessa, Tex. That is also a biennial event.

Templeton Completes Texas Gas Discovery

Templeton Energy Inc.'s Katy Gas Unit well No. 1 in Harris County, Texas, tested 4.5 MMcfd of natural gas through a 14/64-in. choke with flowing tubing pressure of 4,400 psi from perforations in the First Wilcox sand at 10,565-86 ft. The well is the first discovery on a 1,400-acre prospect.

Tucker Wildcat In Sterling County

Tucker Drilling Co.'s Terry 109 No. 1 wildcat in Sterling County, Texas, tested 306 b/d of oil on a potential test with a gas-oil ratio of 105:1.

The test was run on an 8/64-in. choke from Ellenburger perforations at 8,246-68 ft.

Development Well Is Wyoming Gasser

A development well completed by Energetics Inc. in the Monument Butte Area, 30 miles southeast of LaBarge in Sweetwater County, Wyoming, tested

Improved refining, marketing operations boost earnings

The earnings picture brightened slightly during the second quarter of 1983, a welcome change for the oil industry after months of unprofitable reports.

Improved refined product margins, increased overseas oil and gas production, and an overall firming of prices are the primary reasons for the marked improvement.

The 94 oil companies responding to our survey report net income of $5.3 billion, a 9% increase over the same period in 1982. Profit margin for the group for the first and second quarters dropped to 3.6% from 3.8% last year.

Improved refining and marketing profit and reduced overhead expenses helped Exxon post a 26.6% earnings gain.

Atlantic Richfield's 4% drop in net income for the quarter was a result of a decrease in inventory profit, lower crude prices, and higher production and exploration expenses.

A 55% decline at Ashland Oil was blamed on lower profit margins from its largest business, oil refining and marketing, as well as continued impact of the recession on its chemicals, construction, and engineering and technology operations.

Getty Oil's earnings benefited from lower domestic and foreign exploratory costs, increased domestic crude-oil production, and higher earnings from insurance operations. Earnings for the quarter increased 4.5%.

Lower Mideast crude oil prices and improvements in refining and marketing operations world-wide combined for a 40% increase in net income at Mobil.

Phillips Petroleum reported 16% higher second quarter earnings, due primarily to higher natural gas liquids production, improved prices for natural gas and natural gas liquids, and increased crude oil production.

Standard Oil of California posted a 40% increase in net income, mainly as a result of firming of depressed petroleum product prices, the impact of reduced exploration expenses, and the acquisition of foreign crude oil on more competitive terms.

Standard Oil (Indiana) attributed 11.5% higher second quarter earnings to improved refined product margins and increased production of crude oil and natural gas overseas. Partially offsetting these gains were reduced market prices for crude oil and lower output of natural gas in the U.S.

Standard Oil (Ohio) reported slightly higher earnings, due to recovery of refining and marketing margins and increased volumes. The second quarter also benefited from anticipated first quarter sales of Alaskan crude oil which shifted into the second quarter because of delays in delivery.

Lower marketing and administrative expenses in Sun's U.S. refining and marketing operations resulted in a 23% earnings gain.

Tenneco reported slightly higher earnings even though its energy operations were hurt by a drop in

GAS COMPANIES' SECOND QUARTER FINANCIAL REPORTS

	Three months ending June 30						Six months ending June 30						Profit Margin	
	Revenues ($MIL)			Earnings ($MIL)			Revenues ($MIL)			Earnings ($MIL)				
Company	1983	1982	%CHG	1983	1982	%CHG	1983	1982	%CHG	1983	1982	%CHG	1983	1982
Alabama Tennessee N.G.	30.2	29.7	1.4	1.4	1.3	4.1	73.4	67.0	9.5	3.0	3.0	0.8	4.1	4.5
American Nat. Resources	744.5	683.4	8.9	31.4	33.2	-5.4	1727.0	1746.7	-1.1	92.3	94.5	-2.3	5.3	5.4
ARKLA[1]	322.8	307.0	5.1	27.6	27.0	2.3	1324.1	1242.8	6.5	82.9	93.2	-11.1	6.3	7.5
Coastal Corp.	1382.6	1336.1	3.5	31.1	15.8	96.8	2942.9	2900.7	1.5	45.2	21.8	107.1	1.5	0.8
Columbia Gas	964.5	994.3	-3.0	25.7	38.8	-33.7	2721.0	2869.8	-5.2	92.3	131.1	-29.6	3.4	4.6
Consolidated Natural Gas	726.3	628.7	15.5	30.2	25.3	19.6	1943.4	1829.2	6.2	134.5	111.9	20.2	6.9	6.1
The El Paso Company	984.3	1051.7	-6.4	22.9	18.2	25.6	2207.1	2107.3	4.7	37.1	39.4	-5.7	1.7	1.9
ENSERCH	802.2	901.5	-11.0	9.8	36.1	-72.8	1793.8	1905.9	-5.9	49.0	93.3	-47.4	2.7	4.9
Equitable Gas	95.6	78.5	21.8	13.7	4.3	221.1	428.6	407.7	5.1	37.5	36.8	1.9	8.7	9.0
Houston Natural Gas[2]	696.7	785.2	-11.3	47.7	63.5	-24.9	2239.9	2452.4	-8.7	163.9	202.7	-19.1	7.3	8.3
InterNorth	1058.1	718.2	47.3	32.2	24.9	28.9	2417.9	2167.5	11.6	134.1	133.3	0.6	5.5	6.1
KN Energy[1]	107.2	95.7	11.9	4.6	3.0	51.9	494.9	484.6	2.1	27.5	27.8	-0.8	5.6	5.7
Mountain Fuel Supply[1]	362.0	299.7	20.8	41.5	34.3	21.1	616.0	516.9	19.2	55.6	42.7	30.3	9.0	8.3
National Fuel Gas[3]	211.8	184.7	14.7	5.4	-0.1		891.7	851.2	4.8	30.5	37.2	-18.0	3.4	4.4
Northwest Energy	459.6	297.1	54.7	-0.4	1.8		1263.1	784.0	61.1	32.2	32.9	-2.1	2.6	4.2
NOVA, An Alberta Corp.	922.4	858.1	7.5	36.5	31.0	17.7	1989.0	1588.0	25.3	69.1	58.4	18.3	3.5	3.7
ONEOK Inc.	254.4	252.5	0.7	9.3	10.8	-14.4	602.0	626.4	-3.9	20.7	33.8	-38.7	3.4	5.4
Pacific Lighting	1080.9	1006.7	7.4	41.7	32.5	28.3	2348.0	2181.2	7.6	74.2	61.2	21.1	3.2	2.8
Panhandle Eastern	732.8	792.4	-7.5	26.9	62.6	-57.0	1767.1	1749.1	1.0	88.5	136.0	-34.9	5.0	7.8
Peoples Energy	386.6	322.2	20.0	12.8	6.6	93.9	1316.5	1391.3	-5.4	51.3	58.2	-11.9	3.9	4.2
Pioneer Corp.	258.5	254.8	1.5	20.1	16.6	20.8	547.2	577.2	-5.2	41.6	46.5	-10.5	7.6	8.1
Sonat Inc.	580.7	611.4	-5.0	52.6	49.1	7.1	1426.9	1427.0	-0.0	118.2	112.3	5.2	8.3	7.9
Southern Union Co.	242.0	249.4	-3.0	2.8	1.2	128.7	587.7	593.9	-1.0	16.7	14.3	16.8	2.8	2.4
Texas Eastern Corp.	1254.7	1412.0	-11.1	31.0	42.8	-27.6	2714.1	2836.6	-4.3	68.6	104.7	-34.5	2.5	3.7
Texas Gas Resources	640.3	673.3	-4.9	4.8	28.4	-83.0	1431.9	1456.6	-1.7	29.6	58.2	-49.1	2.1	4.0
TransCanada Pipelines	715.8	794.6	-9.9	38.7	31.4	23.3	1639.3	1815.1	-9.7	85.1	70.1	21.4	5.2	3.9
Transco Energy Co.[1]	885.5	964.1	-8.1	24.9	41.8	-40.5	4040.7	3585.9	12.7	113.0	147.7	-23.5	2.8	4.1
Union Gas Ltd.	264.3	227.4	16.2	3.7	3.6	2.5	672.9	623.2	8.0	21.3	27.9	-23.8	3.2	4.5
United Energy Resources	872.7	1375.1	-36.5	12.3	54.2	-77.4	2132.5	2950.0	-27.7	51.9	118.4	-56.2	2.4	4.0
Westcoast Transmission	178.0	215.6	-17.4	15.9	18.2	-12.6	510.0	639.9	-20.3	33.1	37.7	-12.2	6.5	5.9
TOTAL	18217.9	18401.3	-1.0	658.7	758.2	-13.1	46810.4	46375.1	0.9	1900.7	2186.8	-13.1	4.1	4.7

[1] Twelve months [2] Nine months ending April 30 [3] Ends May 31

OIL COMPANIES' SECOND QUARTER FINANCIAL REPORTS

	Three months ending June 30						Six months ending June 30						Profit Margin	
	Revenues ($MIL)			Earnings ($MIL)			Revenues ($MIL)			Earnings ($MIL)				
Company	1983	1982	%CHG	1983	1982	%CHG	1983	1982	%CHG	1983	1982	%CHG	1983	1982
Adams Resources & Energy	33.2	59.1	-10.0	1.6	1.3	27.8	93.4	105.5	-11.5	6.6	0.6	1002.0	6.7	0.4
Adobe Oil & Gas	41.4	49.9	-16.9	5.4	5.8	-6.6	83.1	103.7	-19.9	11.1	11.7	-5.2	13.4	11.3
Amerada Hess	1903.7	1780.4	6.9	68.2	61.1	11.7	3748.0	4133.6	-9.8	73.2	44.9	63.0	2.0	1.1
American Petrofina	594.1	608.0	-2.3	8.6	10.9	-21.0	1018.4	1183.2	-13.9	8.9	26.9	-66.8	0.9	2.3
American Quasar	9.2	13.6	-32.5	-3.2	-0.5		20.7	28.4	-27.1	-3.7	1.5			5.1
Anglo Energy[1]	33.5	43.7	-23.4	-41.1	-1.6		114.7	154.6	-25.8	-42.5	8.3			5.3
Argo Petroleum	4.8	5.3	-9.6	-0.5	-0.8		10.1	11.0	-8.9	-1.3	-1.4			
Asamera	97.8	109.8	-10.9	1.7	0.7	137.5	186.7	223.2	-16.4	-3.9				
Ashland Oil[1]	2035.5	2199.4	-7.5	31.0	69.1	-55.2	5888.7	6779.3	-13.1	45.6	105.0	-56.6	0.8	1.5
Atlantic Richfield	6606.3	6915.9	-4.5	393.4	409.8	-4.0	12968.7	13450.6	-3.6	723.7	795.2	-9.0	5.6	5.9
Beard Oil	7.0	9.7	-28.0	-0.8	0.2		15.4	18.8	-18.4	-1.1	0.6			3.4
Buttes Gas & Oil	31.9	29.6	7.7	0.3	-1.3		64.1	83.7	-23.4	1.4	0.7	87.3	2.2	0.9
Callon Petroleum[2]	22.9	16.7	37.3	0.3	2.1	-83.6								
Commonwealth Oil Refining	4.8	101.9	-93.3	-3.6	2.6		17.7	266.1	-93.3	-3.8	-15.3			
Consolidated O & G	9.2	10.0	-8.3	0.5	-0.1		18.7	21.6	-13.3	-0.7	-2.3			
Crown Central Petroleum	352.2	415.6	-15.3	3.6	-3.2		699.7	829.2	-15.6	-7.2	-6.8			
Crystal Oil	45.1	45.1		-0.9	-1.1		96.1	106.1	-11.3	-1.3	-1.9			
Damson Oil[1]	22.3	21.1	6.0	2.2	2.0	7.9	64.4	51.8	24.6	6.8	4.8	40.9	10.6	9.3
Diamond Shamrock	978.4	857.7	14.1	26.3	31.9	-17.7	1833.8	1648.8	11.2	30.9	61.1	-49.4	1.7	3.7
Dorchester Gas[3]	283.8	376.2	-24.6	3.2	4.3	-25.8	1110.3	805.5	37.8	11.4	13.8	-17.1	1.0	1.7
Dyco Petroleum	10.9	14.3	-23.3	1.9	3.9	-52.2	23.7	28.5	-17.1	4.2	7.8	-46.0	17.9	27.6
Energy Reserves Group	34.6	39.6	-12.5	2.9	-0.9		73.0	81.8	-10.7	6.4	-0.3		8.8	
Enstar Corp.	58.8	84.4	-30.3	2.0	9.0	-77.8	152.6	179.5	-15.0	13.2	19.5	-32.3	8.7	10.9
Equity Oil	5.3	5.7	-7.2	1.1	0.5	134.0	10.8	11.8	-7.8	2.2	1.7	31.0	20.6	14.5
Exeter Oil	1.1	1.1	0.4	0.2	0.2	-5.9	2.2	2.1	1.3	0.3	0.4	-17.5	13.7	16.8
Exxon	22881.0	25121.0	-8.9	1075.0	849.0	26.6	46586.0	51962.0	-10.3	2135.0	1688.0	26.5	4.6	3.2
Felmont	17.7	21.2	-16.3	2.5	4.3	-42.3	39.2	39.2	-0.1	6.7	7.1	-6.0	17.1	18.2
Forest Oil Corp.	29.5	36.8	-19.7	1.4	1.8	-24.6	66.4	75.9	-12.4	5.4	5.2	3.0	8.1	6.9
Freeport McMoRan	186.2	175.0	6.4	19.6	15.6	25.9	390.4	369.9	5.5	40.5	41.9	-3.4	10.4	11.3
Galaxy Oil	3.0	3.5	-13.9	-0.6	-0.8		6.3	6.9	-8.5	-1.0	-1.4			
Getty Oil	3006.6	3108.5	-3.3	163.7	156.6	4.5	6025.5	6269.2	-3.9	321.3	336.2	-4.4	5.3	5.4
Gulf Energy & Dev.	27.9	18.8	48.6	1.0	1.1	-3.6	58.0	34.2	69.6	2.3	1.5	52.7	3.9	4.4
Gulf Oil Corp.	6987.0	7416.0	-5.8	223.0	227.0	-1.8	13885.0	16951.0	-7.1	405.0	315.0	-21.4	2.9	3.4
Hadson Petroleum	7.2	8.8	-17.6	1.8	4.0	-54.6	11.9	19.3	-38.2	2.9	9.2	-68.9	24.0	47.7
Hadson Petroleum	7.2	8.8	-17.6	1.8	4.0	-54.6	11.9	19.3	-38.2	2.9	9.2	-68.9	24.0	47.7
Hamilton Bros. Petroleum	30.5	34.8	-12.4	7.5	-1.6		76.1	89.0	-14.5	10.9	4.3	151.7	14.4	4.9
Harken Oil & Gas	1.4	1.2	22.5	1.4	-0.5		2.9	2.6	10.5	1.3	-0.8		46.3	
Helmerich & Payne	51.8	89.0	-41.8	10.4	18.6	-43.8	184.7	279.5	-33.9	37.2	62.2	-40.1	20.2	22.2
Hershey Oil	1.8	1.8	-0.2	0.1	0.1	17.5	3.6	3.6	-0.2	0.4	0.4	19.9	11.7	9.7
Holly Corp[6]	113.1	107.2	5.5	2.0	1.4	40.4	239.0	238.4	0.3	5.0	7.2	-30.5	2.1	3.0
Howell Corp.	33.3	63.9	-47.9	0.3	0.8	-66.8	73.9	130.8	-43.5	0.4	1.6	-77.0	0.5	1.2
Howell Petroleum	15.7	20.9	-24.9	2.0	2.5	-19.1	38.0	43.7	-13.0	4.5	4.5	-0.5	11.8	10.3
Inexco Oil	43.4	55.7	-22.1	3.1	4.4	-29.9	86.0	118.5	-27.5	5.8	12.0	-51.9	6.7	10.1
KRM Petroleum	0.9	1.3	-29.9				2.0	2.7	-24.9		0.2			6.8
Lear Petroleum	55.1	48.2	14.2	4.0	0.5	712.7	109.2	102.9	6.1	8.7	-1.3	-783.0	7.9	-1.3
Louisiana Land & Exp.	311.0	310.4	0.2	24.3	20.4	19.0	564.3	614.7	-8.2	50.9	33.8	50.4	9.0	5.5
Mapco Inc.	507.9	481.8	5.4	11.0	17.9	-38.4	977.3	962.7	1.5	20.8	33.9	-38.6	2.1	3.5
May Petroleum	6.4	7.5	-15.2	-0.1	0.3		15.1	15.1	0.3	-1.7	1.0			6.5
Maynard Oil	6.6	8.1	-18.5	-1.4	-1.7		15.5	19.5	-20.4	-1.7	-0.6			
McFarland Energy	3.8	3.7	2.3	1.0	0.8	20.2	7.6	7.5	1.3	1.9	1.8	9.1	25.7	23.8
Mesa Petroleum	101.2	99.8	1.4	18.1	35.9	-49.7	207.9	204.0	1.9	58.8	69.1	-14.9	28.3	33.9
Mobil Corp.	14602.0	15790.0	-8.6	402.0	287.0	40.1	28690.0	32191.0	-10.9	652.0	531.0	22.8	2.3	1.6
Moran Energy	19.9	24.3	-18.3	0.8	1.8	-56.5	43.9	53.4	-17.8	2.2	5.9	-63.1	5.0	11.1
Murphy Oil	618.2	598.6	3.3	40.4	41.7	-3.2	1329.2	1362.9	-1.0	68.2	75.1	-9.1	5.1	5.6
Natomas	423.5	405.7	4.4	39.6	46.3	-14.6	770.1	795.3	-3.2	33.0	96.2	-65.7	4.3	12.1
Noble Affiliates	70.3	107.7	-34.7	5.9	20.2	-71.1	147.8	222.4	-33.5	12.9	42.7	-69.7	8.7	19.2
Norris Oil	0.7	0.7	10.1	0.1	0.1		1.4	1.3	8.0	0.1	0.1		6.9	7.5
Nugget Oil Corp.	9.7	7.0	38.3	6.8	0.8	740.9	0.6	3.7	-82.6	6.7	0.3	2027.6	1040.7	8.5
Oxoco	11.0	8.9	23.8	2.2	1.7	23.5	22.6	16.4	38.4	4.2	3.4	22.1	18.5	21.0
Patrick Petroleum	16.4	24.8	-33.9	-2.0	-1.7		34.9	49.9	-30.0	-1.9	-1.7			
Peninsula Resources	2.3	3.6	-35.4	-2.0	-1.8		4.6	10.1	-54.7	4.0	2.4	67.8	86.9	23.5
Pennzoil Co.	567.4	588.7	-3.6	28.3	43.8	-35.3	1127.2	1175.9	-4.1	68.6	82.7	-17.0	6.1	7.0
Petroleum Devel.	3.0	4.0	-24.9	0.1	-0.1		8.3	6.3	33.5	0.4	-0.4		4.5	
Phillips Petroleum	3789.0	4028.0	-5.9	169.0	146.0	15.8	7426.0	7833.0	-5.2	298.0	338.0	-11.8	4.0	4.3
Prairie Producing Co.	4.8	6.4	-25.7	0.9	0.7	33.8	9.4	13.5	-30.6	1.5	2.1	-27.6	16.4	15.7
Quaker State	245.6	249.2	-1.5	12.1	14.0	-13.9	458.8	473.2	-3.0	18.2	19.8	-8.1	4.0	4.2
Sabine Corp.	25.6	48.7	-47.3	3.2	7.7	-58.8	58.2	96.5	-39.7	29.2	13.4	118.2	50.2	13.9
Seneca Oil	3.8	5.3	-29.1	2.0	1.3	58.9	8.9	10.8	-17.9	-3.3	-1.9			
Shell Oil	4872.0	5105.0	-4.6	390.0	380.0	2.6	9517.0	9947.0	-4.3	636.0	724.0	-12.2	6.7	7.3
Southland Royalty	79.8	92.9	-14.1	6.4	8.8	-27.2	162.2	187.7	-13.6	15.1	16.8	-9.9	9.3	8.9
Standard California	7092.0	9370.0	-24.3	366.0	263.0	39.9	14087.0	19390.0	-27.3	678.0	493.0	37.5	4.8	2.5
Standard Indiana	7422.0	7558.0	-1.8	426.0	382.0	11.5	14882.0	14723.0	1.1	825.0	852.0	-3.2	5.5	5.8
Standard Ohio	3101.0	3379.0	-8.2	476.0	473.0	0.6	5867.0	6996.0	-16.1	753.0	928.0	-18.9	12.8	13.3
States Petroleum[5]	3.5	3.7	-6.9	-0.7	0.8	-185.0	6.5	7.1	-8.8	-0.7	1.4			19.3
Summit Energy	1659.3	2152.2	-22.9	-155.3	-40.0		3689.7	4442.0	-16.9	-84.5	46.4			1.0
Sun Co.	3780.0	4160.0	-9.1	134.0	109.0	22.9	7520.0	8210.0	-8.4	223.0	232.0	-3.9	3.0	2.8
Superior Oil	418.6	505.9	-17.3	36.7	76.9	-52.2	876.1	1036.6	-15.5	60.4	160.3	-62.3	6.9	15.5
Tenneco	3566.0	3686.0	-3.3	189.3	188.5	0.4	7175.0	7452.0	-3.7	284.4	301.9	-5.8	4.0	4.1
Tesoro Petroleum[1]	712.2	556.3	28.0	10.6	16.7	-36.6	1829.8	1806.2	1.3	23.1	30.6	-24.6	1.3	1.7
Texaco Inc.	9900.0	11500.0	-13.9	327.0	305.0	7.2	20100.0	24500.0	-18.0	646.0	672.0	-3.9	3.2	2.7
Texas American Energy	43.3	45.1	-4.1	-1.8	-1.8		116.7	114.8	1.6	1.4	0.2	713.6	1.2	0.1
Texas International	41.3	45.7	-9.5	4.0	3.7	8.1	76.3	90.4	-15.6	4.2	7.0	-39.7	5.5	7.7
Tosco Corp	748.6	827.2	-9.5	-194.5	106.7		1673.7	1650.2	-10.7	241.1	107.2	124.9	16.4	6.5
Total Petroleum N.A.	509.7	551.7	-7.6	-16.5	-5.4		1010.8	1098.1	-7.8	-53.6	0.8			0.1
Transcontinental Energy	6.2	13.7	-54.7	3.7	0.5	717.7	15.6	30.0	-48.2	7.4	0.7	926.3	47.9	2.4
Union California	2807.0	2909.7	-3.5	139.4	197.6	-29.5	5281.0	5391.3	-2.0	267.7	366.1	-26.9	5.1	6.8
Universal Resources	11.2	14.5	-22.8	-0.6	2.2	-128.4	23.8	31.6	-24.7	-1.3	5.2	-124.0	-5.3	16.6
Wainoco Oil	10.0	12.7	-21.3	0.1	-3.7		22.9	26.3	-12.9	1.2	-6.4		5.1	
Wichita Industries	2.1	2.9	-28.1	0.2	0.2	-6.1	4.2	5.0	-16.7	0.2	-0.2		5.8	
Wilshire Oil of Texas	2.2	3.3	-32.9	0.4	0.4	19.7	5.0	6.3	-20.6	1.2	0.6	83.9	23.5	10.2
Wiser Oil	11.6	12.0	-3.0	2.4	3.5	-32.6	25.8	25.8		6.3	7.1	-11.5	24.5	27.7
Woods Petroleum	16.7	20.8	-19.7	3.0	5.9	-49.2	35.2	41.2	-14.5	7.7	11.7	-33.9	21.9	28.3
Worldwide Energy	21.3	12.2	74.1	-2.8	-0.9	221.8	38.9	26.4	47.5	-1.4	-1.0	39.9	-3.6	-3.8
TOTAL	114753.1	125522.7	-8.6	4934.8	5053.3	-2.3	232024.4	258472.8	-10.2	9726.3	10091.7	-3.6	4.2	3.9

[1] Nine months. [2] Year ends May 31. [3] Ends May 31. [4] Ends Jan. 31. [5] Ends April 30. [6] Ends Sept. 30.

natural gas production, an industry wide surplus of gas, and a soft market.

Firming of spot market prices for crude oil and OPEC's establishment of production ceilings boosted Texaco's earnings 7% over the previous year.

Lower domestic natural gas production and prices and sagging earnings performances by its refining, marketing and chemical operations accounted for Union Oil of California's 30% drop in net income.

Adobe Oil & Gas posted a 6.6% drop in earnings due to a slowdown in exploration.

A decline in the volume of natural gas produced, reflecting curtailments by pipeline purchasers, was primarily responsible for American Petrofina's 21% decline in net income.

Anglo Energy reported a $41 million loss for the quarter as a result of disposition of various operating units in the Supply and Equipment Division and a write-down of oil and gas properties.

A decline in oil and gas sales as well as drilling and well servicing revenues adversely affected Beard Oil's second quarter results, posting a $1.1 million loss.

Crown Central Petroleum realized a net profit of $3.9 million compared to a net loss in 1982. Improvement was due mainly to increases in margins for refined products.

Economic pressures in the petroleum industry continued to hamper Crystal Oil's operations, resulting in a net loss for the quarter.

Enstar's 78% drop in earnings was due principally to curtailed liquefied natural gas production and lower oil and LNG prices in Indonesia.

A decline in natural gas production was blamed for Forest Oil's 25% decline in net income.

The decreased demand for natural gas also hindered Gulf Energy & Development's second quarter earnings which dropped 3.6%.

Howell Corp.'s 67% decline in net income resulted from continued weakness of conventional fuel product prices.

A decrease in dry holes and exploratory charges combined to produce a 19% increase in earnings at Louisiana Land & Exploration.

Mesa Petroleum reported net income of $15.1 million compared to $32.2 million last year.

Losses sustained by contract drilling operations were primarily responsible for Moran Energy's 56% decrease in earnings.

Natomas said its 14.5% drop in net income was due to increased Indonesian finding and development costs, as well as lower petroleum prices and production.

Net earnings declined 71% at Noble Affiliates as a result of decreases recorded by three operating units: oil and gas, contract drilling, and trucking.

Sharply lower coal sales, reduced oil and gas sales, and a materials inventory write-down were major contributors to the loss reported by Patrick Petroleum.

Pennzoil said reduced natural gas sales and pipeline delays in calculating and paying amounts contractually owed because of reduced 1982 takes adversely affected second quarter earnings which dropped 35%.

Lower depreciation and amortization due to higher estimated recoverable reserves of oil and gas increased Prairie Producing's net income 34%.

Southland Royalty's earnings dropped 27% due to continued reduced demand for natural gas.

Superior Oil's second quarter earnings were hampered by lower domestic oil and gas prices and volumes, and dry hole costs significantly above those of last year. Net income fell 52%. *(Continued)*

Tosco posted a net loss of $194.5 million for the quarter due to non-cash charges for revaluations of assets at the company's Duncan, Okla. and Bakersfield, Calif. refineries which are for sale.

Wainoco Oil turned a net loss in 1982 into a $101,000 gain in 1983 due to lower depreciation and depletion, reduced interest charges, and lower general and administrative costs.

The 30 gas companies responding to our survey reported a 10% decline in net income for the second quarter as a result of lower natural gas demand. Profit margin for the group remained unchanged from the 3.9% posted last year.

American Natural Resources said its 159% increase in earnings was achieved mainly by transporting additional gas for others, implementing operating efficiencies, and establishing lower prices for purchases of deregulated gas.

Coastal Corp. reported a 97% increase in net income reflecting increased margins in its refining and marketing segment and the addition of the Wyoming Interstate gas pipeline system.

Colder weather in the Consolidated Natural Gas operating area is the main reason for their 20% increase earnings.

The nationwide excess deliverability of natural gas continued to supress Enserch's natural gas sales and associated production of condensate and gas liquid, reducing income 73%.

KN Energy said higher rates helped offset the decline in gas sales on the interstate system, resulting in 52% increase in earnings.

Peoples Energy's net income for the quarter was aided by higher rates and colder weather. Earnings increased 21%.

The main reason for Pacific Lighting's improved results this quarter were improvements in utility and energy-related operations. Net income rose 28%.

Lower prices for North Sea crude oil and weak overall fuel demand stemming from a sluggish U.S. economy continued to adversely affect Texas Eastern's earnings, causing 28% decrease.

United Energy Resources' operations were adversely affected by the economy and the current excess deliverability of gas supply, as net income dropped 77%. ■

FINANCIAL NOTEBOOK

Capital appropriations by the petroleum industry in the second quarter fell 17.6% from the first quarter. Appropriations by non-petroleum firms increased 14.7% for the quarter, according to The Conference Board.

Capital spending by the industry was $5.2 billion, down 3.3% from the previous quarter. Spending prospects for 1983 continue to be weak, they report, with petroleum outlays expected to dip by 23%, compared to a 7% drop by non-industry manufacturers.

Cancellations and adjustments of previously approved appropriations amounted to $949 million in the second quarter, mostly in the petroleum industry.

Contracts. C F Braun was awarded a subcontract to design a process plant to produce liquefied petroleum gas at Tanjung Ugan, Indonesia by Nippon Steel. Toyo Menka Kaisha and Nippon Steel hold the prime contract with Pertamina, the Indonesian state oil company, and are responsible for procurement and construction.

Shell UK Exploration and Production awarded an offshore oilfield service contract to Gearhart Geodata Services (Aberdeen, Scotland). Contract involves the provision of high-technology "measurement while drilling" services by Gearhart to the majority of Shell's North Sea rigs and production platforms.

Total Oil Marine (France) awarded a $68 million contract to a joint venture Scottish shipyard to build a North Sea oil platform.

Zamel & Turbag/Brown & Root Al Khobar (Saudi Arabia) signed contracts with Aramco to provide construction management for various projects in the Eastern Province at Dhahran.

Texas International signed a contract with Celeron (Goodyear Tire & Rubber) for the transportation and sale of its Eloi Bay Field deep Miocene natural gas.

Ebasco Services (Enserch) was awarded a contract to provide construction and related services for an ongoing maintenance, repair, and modification program at Public Service of Colorado's Fort St. Vrain Nuclear Power Station.

Mergers/acquisitions. Mesa Petroleum agreed to sell its 3.98 million Superior Oil common shares back to Superior at $42/share.

Western Mining Corporation Holdings (Australia) will acquire all of the issued and outstanding shares of Mesa Australia for $35.4 million.

Under a previously announced merger agreement, Gulf Energy & Development became a unit of Penn Central.

Suburban Propane Gas entered into a definitive agreement with Proco Holding under which SPG will merge with a Proco unit.

Properties acquired. Apache Petroleum acquired an average 82% working interest in 34 production oil wells in the Riffe field in north central Kansas for $31.9 million. Interests were acquired from a group of companies including: C.C. & S. Oil Operations (Hayes, Kan.); Search Natural Resources (Denver, Colo.); Colorado Crude Explorations (Denver, Colo.); and Western Energy (Williston, N.D.).

Damson Oil acquired an overriding royalty interest in proved developed reserves estimated to yield 2.49 million bbl of oil from Antelope Co.

Joint ventures. Tenneco Oil Exploration and Production, Philadelphia Life Insurance (Tenneco), and Wilhelm Wilhemsen (Oslo, Norway) agreed to a joint venture under which about 20 vessels will be used to support Tenneco Oil's exploration and production activities in the Gulf.

Projects. Mark Producing announced the fabrication and installation of an 8-pile offshore platform for the drilling and producing of up to 24 oil/gas wells on South Marsh Island off the Louisiana coast.

Briefs. Frontier Pipeline is accepting tenders for shipment through its 290-mile crude petroleum pipeline in Utah and Wyoming.

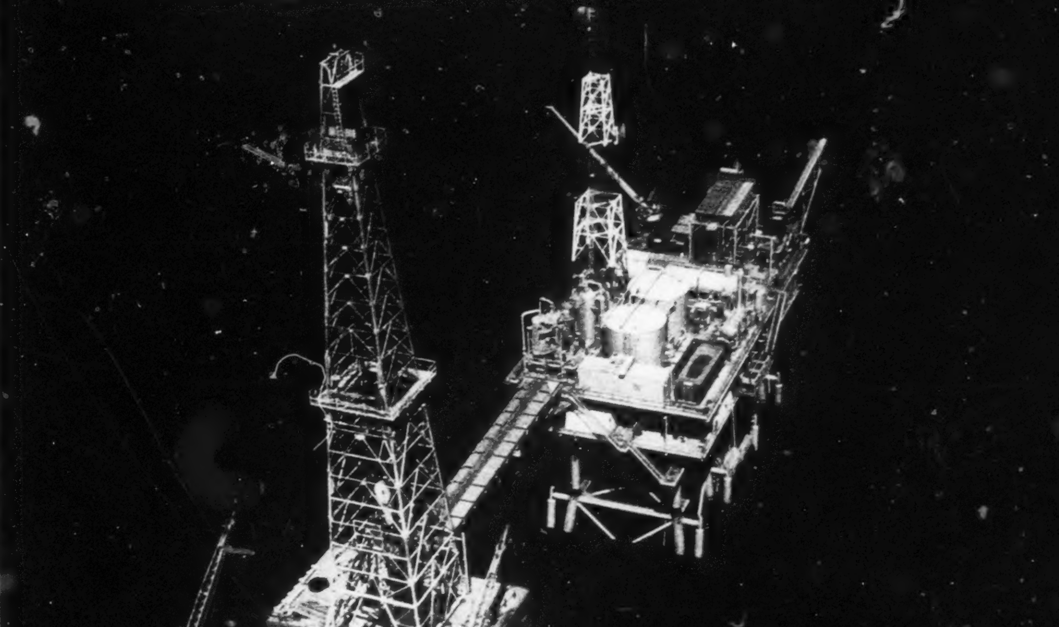
Amoco Production plans an extensive in-fill drilling program to further develop its east and west Hackberry fields in Cameron Parish, La. ■

FALL 1983 INTERNATIONAL

OFFSHORE RIG LOCATOR

Supplement to the October 1983 issue of

Petroleum Engineer INTERNATIONAL



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- Contractor Addresses • Rig Locations Worldwide

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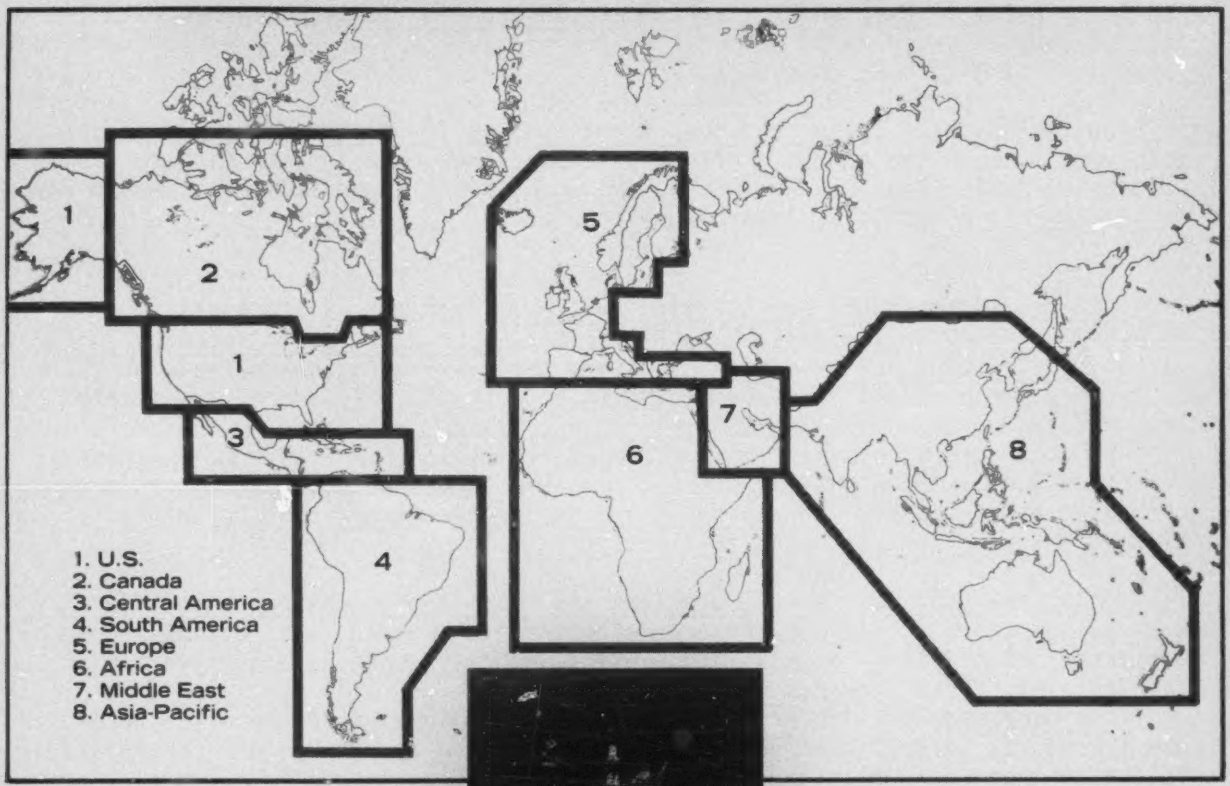

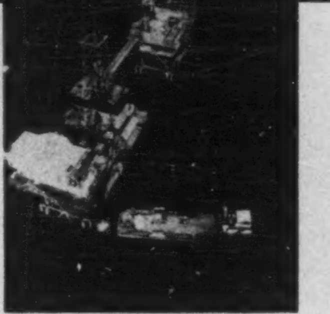

(Photo courtesy of Diamond Shamrock Corp.)

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For over a quarter century, drilling contractors have given this magazine Rig Locator data, providing operators who let drilling contracts with mechanical specifications and locations of contract rotary rigs throughout the world. Since the Rig Locator's 1955 origin, other organizations periodically attempt similar concepts, while others shuffle and republish PEI Rig Locator data. This Rig Locator, detailing 123 contractors and 963 offshore rigs, is the most complete presentation of contract offshore drilling rigs published.

Drawworks Manufacturers Abbreviations

Bethlehem Supply Co.	Beth
Bucyrus-Erie Co.	B-E
Cabot Corp Machinery Div.	Cbot
Cardwell Mfg. Co.	Crdw
Challenger	Chal
Continental Emsco	C-E
Cooper Mfg. Corp.	Coop
DeMag Mfg. Co.	DeMg
Ellis-Williams	E-W
Ewbank Mfg. Div. Inc.	Ewb
George E. Failing Co.	Fail
Foramines	Fora
Gardner-Denver	G-D
Hacker Machine & Supply Co.	Hack
Haniel & Lueg	H-L
Hooper Machine Works Inc.	Hoop
Houston Systems	HS
Howard-Turner Machine Works	HT
Ideco Inc.	Idco
Ingersoll-Rand Co.	I-R
Joy Mfg. Co.	Joy
Justiss-Mears Oil Co.	J-M
Lee, Harold Engineering	Lee
Mayhew Supply Co Inc.	May
Mid-Continent Supply	MC
National Supply Co.	Nat
OIME	OIME
Oilwell Div. (U.S. Steel)	Oiwl
OPI Pump Div.	OPI
Quincy Mfg.	Quin
Salzgitter Maschinen Mfg. Co.	Salt
Skytop/Brewster	S/B
Spencer-Harris Machine & Tool Co.	S-H
Superior	Sup
Tri Service Mfg. Co.	TSM
Wagner-Morehouse Inc.	W-M
Walker-Neer Mfg. Co. Inc.	W-N
Weiss Corp.	Weis
Wheland Co.	Whln
Wichtex Machinery Co. Inc.	Wich
Wilson Mfg. Co. Inc.	Wils
Worth Co.	Worth

Drilling Outlook...

With the worldwide offshore rig utilization rate hovering around 75%, the lowest average in years, the offshore drilling industry remains depressed. Some 180 floaters and jackups are idled, waiting for activity to pick up.

The rig construction business is in worse shape. From a peak of 160 jackup and semisubmersible orders in 1980, new orders fell to 12 rigs in 1982--and 1983 isn't any better. Only 50 rigs are under construction today, compared with 130 last January. Heated world competition for the few 1984 orders will put construction yards in a bind to make ends meet.

On the bright side, a good omen for an upturn in offshore drilling is the continued rise in the domestic offshore seismic crew count. According to the Society of Exploration Geophysicists, the count has climbed from 39 crews in May to 49 crews in August, the latest available number.

Other positive signs are starting to emerge from the offshore drilling industry, particularly along the Gulf Coast. Expect activity to increase in the last months of 1983 and beyond as operators begin exploring new acreage offshore Louisiana, Alabama, and Mississippi obtained in the OSC 72 federal lease sale last May.

Many of the 78 companies that successfully bid on 656 tracts were first-timers or independents who could bring new life to the offshore arena, an area dominated by the majors. Nearly one-third of the tracts are in deep waters, which is good news for contractors with floating rigs.

Along the U.S. West Coast, drillers also are finding new opportunities for work as operators accelerate offshore efforts in the Santa Maria Basin. Presently a fleet of 10 drilling vessels is operating in Californian waters--five semi-submersibles, three jackups, and two drillships.

The pace should climb as operators initiate more exploratory drilling on new tracts, as well as continue delineation drilling of some significant discoveries. On the horizon, more platform rigs will be required as companies begin platform installations off Point Arguello in the upcoming years.

Out east, Shell begins its 18-month exploration program off the mid-Atlantic coast in 5,500 to 7,000 ft of water. Using the Discoverer Seven Seas drillship, Shell will take about 4 months to drill its first well in a record 6,448 ft of water.

Although the project puts only one rig to work, offshore drilling technology is being advanced and, with a good strike, could renew interest in the area for other companies holding leases.

Alaska is seeing its share of offshore activity. Several COST wells have been drilled, which should lead to drilling operations in several previously unexplored offshore basins. In the near term, only a few harsh environment semisubmersibles will be required, but demand could jump if initial wells prove successful.

In the Alaskan Beaufort Sea, operators currently are drilling from islands with land rigs, but several companies are scrutinizing mobile caisson drilling unit designs for possible use in some of the deepwater tracts acquired in the $2.06 billion OCS Sale 71 last year. Expect several units to be under construction by the end of 1984.

by Steve Moore, Drilling Editor

The international outlook is brightening in many areas, but some countries stymie efforts with restrictive regulations and unfavorable incentives for oil companies. Regardless, activity should be up in 1984.

Off Canada's east coast, 16 vessels are working, including five drillships. Mobil is moving ahead with development plans for its Venture natural gas field and is also carrying out delineation drilling in the giant Hibernia oil field.

Currently three drillships are working in the Canadian Beaufort Sea. Drilling from islands and caissons will continue this winter. Also, Gulf's Conical Drilling Unit will begin drilling operations this year, with the company's Mobile Arctic Caisson to go into service next year.

After several stagnant years for the industry in the North Sea, activity is on the upswing, thanks in part to new taxation policies by the UK government. The industry is ready to exploit new UK gas fields in the southern North Sea after operators negotiated higher wellhead prices. Other development possibilities include the Tern and Eider fields, held jointly by Shell and Esso.

Norway's eighth round of licensing, which includes blocks north of the 62nd parallel, is promising. Exploration efforts in Irish waters should soar after Gulf's recent strike off Ireland's southeast coast. Denmark, Germany, and Holland are all expanding development drilling programs as new fields are discovered and additional platforms come on stream.

Border disputes between Norway and Russia and Denmark and Sweden are hampering exploration efforts. Early resolution of these border problems seems doubtful, especially if hydrocarbons are found.

In the Mediterranean, significant strikes were hit off Sicily and Tunisia--and delineation drilling plans are in the works.

The Asia-Pacific area remains hot, and steady growth is expected for at least 3 more years. Indonesia dominates the offshore drilling activity in the area, but the Philippines, Thailand, and Singapore are all busy. Rig utilization is off only 4% from a year ago, while wildcatting is on the increase.

Exxon and Shell recently signed contracts with China for the rights to explore two offshore areas covering 2,048 sq miles. More contracts with other companies are forthcoming. Meanwhile, ARCO's wildcat struck natural gas in the South China Sea off the coast of the Hainan Islands.

Elsewhere in the Pacific, Japex Offshore discovered deposits offshore Japan, some 175 miles northwest of Tokyo. Several companies plan to be operating semisubmersibles offshore New Zealand before year's end. And new oil and gas reserves have been discovered off the North West Shelf of Australia.

Regardless of these hot spots, the U.S., where most of the idled rigs are stacked, is pivotal in reviving the offshore industry. Secretary of the Interior James Watt's accelerated federal leasing program--which calls for nearly one billion acres to be offered in 41 sales over 5 years--is a big step in the right direction.

How effective the program is in bringing the offshore industry back to life depends on many things, including state-of-the-art technology, crude oil prices, and environmental restraints brought about by state agencies and civic groups. It now appears the worst of the downturn is over, with the rebound slow but steady.

International Offshore Drilling Contractors

ARABIAN DRILLING CO King St PO Box 708 Dammam Saudi Arabia 8575789
ASSOCIATED MARINE SERV INC 809 Fairview Pl N Seattle WA 98109 206-624-4122
ATLANTIC DRILLING CO LTD 33 St Mary's St Edinburgh EH1 1TN Scotland 031 -557-2323
ATLANTIC PACIFIC MARINE CORP 2425 Fountain View Dr Ste 300 Houston TX 77057 713-783-0910
ATWOOD OCEANICS PACIFIC LTD 15835 Park Ten Place Dr PO Box 218350 Houston TX 77218 713-492-2929
BAWDEN DRILLING (UK) LTD Farburn Industrial Estate Dyce Aberdeen Scotland 44 (224) 724399
BAY DRILLING CORP PO Box 2316 Houma LA 70361 504-872-4888
BLOCKER DRILLING & MARINE CO US Hwy 90 E PO Box 53596 Lafayette LA 70505 318-269-0730
BOKENKAMP DRILLING CO 3131 Briarpark Dr Ste 1050 Houston TX 77042 713-789-0555
BOOKER DRILLING CO PO Box 7244 Metairie LA 70010 504-833-2876
BROUGHTON DRILLING CO 921 Main St Ste 1410 Houston TX 77002 713-759-1844

CACTUS INTL INC 13747 Monfort Dr Ste 300 Dallas TX 75240 214-934-3333
CANADIAN MARINE DRILLING LTD PO Box 6800-Postal Station D Calgary AB T2P 0N1 Canada 403-260-5100
CANMAR INTL PO Box 6800-Postal Station D Calgary AB T2P 0N1 Canada 403-260-5100
CHALLENGER DRILLING INC 2515 Kelly Ln Houston TX 77066 713-893-9755
CHILES DRILLING CO 1900 West Loop South Ste 1400 Houston TX 77027 713-621-4991
CLIFFS DRILLING CO Two Allen Center Ste 3150 1200 Smith St Houston TX 77002 713-651-9426
COSIFOR 90 Avenue des Ternes 75017 Paris France (1) 574 35 79
CRC MALLARD WELL PO Drawer 51498 OCS Lafayette LA 70505 318-233-4922
DEUTSCHE TIEFBOHR AG Dellmannstrasse 1 PO Box 75 4444 Bad Bentheim West Germany (Phone) 5922/72-0
DIAMOND M CO PO Box 4558 Houston TX 77210 713-490-5300
DIXILYN-FIELD DRILLING CO PO Box 4251 Houston TX 77210 713-877-8850
DOLPHIN TITAN INTL INC 333 Clay St Ste 2600 Houston TX 77002 713-659-2381
DUAL DRILLING CO 101 N Cruse Broussard LA 70518 318-837-8980
DUAL OFFSHORE CO 600 City Natl Bldg PO Box 240 Wichita Falls TX 76307 817-723-2127
DYVI OFFSHORE A/S PO Box 454 Sentrum Oslo 1 Norway (02) 410100

EAGLE OFFSHORE DRILLING SERVICES INC 7211 Regency Square Blvd Ste 112 Houston TX 77036 713-456-9735
EGYPTIAN DRILLING CO PO Box 71 Nasr City Cairo Egypt 600-230
FLUOR DRILLING SERVICES INC 144 Elk Pl #1010 New Orleans LA 70112 504-581-5333
FORAMER 16 Bis Rue Grange Dame Rose 78143 Velizy Villacoublay France (3) 946.97.17
FOREX NEPTUNE AND/OR AFFILIATES 20 Ave Rapp BP 111 07 75326 Paris Cedex 07 France 555 95 34
GLENDEL DRILLING CO 2761 Old Erath Rd PO Box 765 Abbeville LA 70510 318-898-1637
GLOBAL MARINE DRILLING CO PO Box 4379 7500 San Felipe Houston TX 77210 713-496-8000
GOLAR-NOR OFFSHORE A/S 103 New Oxford St London WC 1A 1DQ England 01.836 9545
GOLDRUS MARINE DRILLING CO PO Box 4394 Houston TX 77210 713-759-6337
GREAT EASTERN DRILLING & ENGINEERING CO 1904 Shaw Centre 1-Scotts Rd Singapore 0922 7377633
GRIFFIN-ALEXANDER DRILLING CO 13430 Northwest Fwy Ste 100 Houston TX 77040 713-460-1804
HARRIS WELL SERV INC PO Drawer 949 Eunice LA 70535 318-457-3376
HELMERICH & PAYNE INTL DRILLING CO Utica at 21st St Tulsa OK 74104 918-742-5531
HOULDER MARINE DRILLING LTD 53 Leadenhall St London EC3A 2BR England (01) 481-2020
HOUSTON OFFSHORE INTL INC One West Loop South Ste 804 Houston TX 77027 713-629-1400
HOUTECH DRILLING 10701 Corporate Dr Ste 230 Stafford TX 77477 713-995-4438
HUTHNANCE DRILLING CO 601 Jefferson Houston TX 77002 713-659-4816
INTERNATIONAL CHANDLERS 1901 N Akard Cumberland Hill Dallas TX 75201 214-653-8700
INTEROCEAN DRILLING SA PO Box 2765 Houston TX 77001 713-871-7500

JAPAN DRILLING CO LTD No 11 Mori Bldg 6-4 Toranomon 2-chome Minatoku Tokyo Japan 501-7391
JEBSENS OFFSHORE DRILLING LTD Greenbank Rd East Tullos Aberdeen AB1 4BQ Scotland (0024) 878218 ext 25
JFP WELL SERVICE INC 13231 Champion Forest Dr Ste 210 Houston TX 77069 713-893-4464
J L OFFSHORE DRILLING INC 10575 Katy Fwy Ste 260 Houston TX 77024 713-492-2888
KCA DRILLING LTD KCA House 227 Shepherds Bush Rd London W6 7AS England 01-741 4811
KEYDRIL CO 2000 Capital Bank Plaza 333 Clay St Houston TX 77002 713-754-3769
KEYES OFFSHORE INC 1250 Shoreline Dr Ste 300 PO Drawer 7 Sugarland TX 77478 713-491-2002
KINGSNORTH MARINE DRILLING LTD 53 Leadenhall St London EC3A 2BR England 01-481-2020
LIVINGSTON OILWELL SERV INC PO Box 2166 298 Prospect St Houma LA 70361 504-868-1430
LOFFLAND BROS CO PO Box 2847 Tulsa OK 74101 918-622-9330
MAERSK DRILLING Esplanaden 50 DK-1098 Copenhagen Danmark 45-1-14-15-14
MAP DRILLING CO 416 Oil & Gas Bldg New Orleans LA 70112 504-524-6262
MARINE DRILLING CO 900 CCNB Center South Corpus Christi TX 78411 512-884-8851
MARINE DRILLING SA 1901 N Akard Cumberland Hill Dallas TX 75201 214-653-8700
MARLIN DRILLING CO 1333 West Loop South Ste 780 Houston TX 77027-9178 713-627-1161
MAYRONNE CO PO Box 432 Harvey LA 70433 504-368-5911
MERIT DRILLING CO Box 79667 Houston TX 77279 713-493-1001
MGF DRILLING CO 2626 Richmond Ave Ste B Houston TX 77098 713-526-7236
MORAN DRILLING LTD 233 Benmar Houston TX 77060 713-820-1865
MORCO A/S PO Box 65 N-4056 Tananger Norway 04-696766
NATIONAL DRILLING CO PO Box 4017 Abu Dhabi UAE 820330
NICKLOS DRILLING CO 5200 Interfirst Plaza Houston TX 77022 713-658-8245
NOBLE DRILLING CORP 1924 S Utica Ste 600 Tulsa OK 74104 918-749-9901
NORDRILL INTL INC 7670 Woodway Ste 150 Houston TX 77063 713-974-0000

OCEAN DRILLING & EXPL CO PO Box 61780 New Orleans LA 70161 504-561-2248
OCEAN DRILLING SERVICES INC 1901 N Akard Dallas TX 75201 214-653-8700
ODEBRECHT PERFURACOES LTDA Rua da Gloria 290 - 10 andar CEP 20241-Rio de Janeiro RJ-Brazil (021) 221-0860 221-2108 231-0995
ODFJELL DRILLING & CONSULTING CO A/S Kokstadflaten 5, N 5065 Blomsterdalen Norway 05-22 77 80 Telex: 42634 odccn/40507 odbas (856)
PACNORSE DRILLING CORP PO Box 1401 Orange CA 92668 915-367-4181
PENROD DRILLING CO 2200 Thanksgiving Tower Dallas TX 75202 214-651-0187
PERFORACIONES ALTA MAR CA Apartado No 1641 Maracaibo Venezuela
PERFORADORA MEXICO SA Insurgentes 432 9th Floor Mexico City 7 Mexico D F
PHOENIX MANAGEMENT CORP 2925 Briarpark 5th Floor Houston TX 77042 713-784-2420
PLATFORM WELL SERV INC PO Box 53836 Lafayette LA 70505 318-237-5555

QUARLES DRILLING CORP 1503 Engineers Rd Belle Chasse LA 70037 504-392-4191
READING & BATES DRILLING CO 901 Threadneedle Ste 200 PO Box 79627 Houston TX 77279 713-496-5000
REBSTOCK DRILLING CO 2601 Lexington Ave Kenner LA 70062 504-467-1321
RESOURCE DRILLING INC PO Box 4341 Houston TX 77210 713-871-8550
RICHTER DRILLING PTY LTD GPO Box 2197 Brisbane Qld 4000 Australia (07) 229-2544 Telex: AA40352 (790)
RIO COLORADO S A Sarmiento 663 7th Floor Buenos Aires Argentina
RIO GRANDE DRILLING CO 2300 Tower Life Bldg San Antonio TX 78205 512-224-4572
ROSS DRILLING CO PO Box 265 3201 Sandefjord Norway 34-63481
ROWAN COMPANIES INC-US 5051 Westheimer 1900 Post Oak Tower Houston TX 77056 713-621-7800
ROWAN INTL INC 5051 Westheimer 1900 Post Oak Tower Houston TX 77056 713-621-7800

SAIPEM SpA Box 12072 S Donato Milanese 20097 (Milano) Italy 02.5201
SALEN PROTEXA DRILLING CO 11777 Katy Fwy Ste 300 South Bldg Houston TX 70079 713-496-7770
SANDERS DRILLING CO PO Box 1086 New Iberia LA 70560 318-364-1537
SANTA FE DRILLING CO 505 S Main St PO Box 1401 Orange CA 92668 714-558-1300
SAVAGE DRILLING INC 9525 Katy Fwy #309 Houston TX 77024 713-932-7299
SEA DRILLING NETHERLANDS 1901 N Akard Cumberland Hill Dallas TX 75201 214-653-8700
SEDCO DUBAI LTD See Ocean Drilling Services Inc
SEDCO INC 1901 N Akard Cumberland Hill Dallas TX 75201 214-653-8700
SEDCO INTERNATIONAL SA 1901 N Akard Cumberland Hill Dallas TX 75201 214-653-8700
SEDCO MARITIME INC 1901 N Akard Cumberland Hill Dallas TX 75201 214-653-8700
SEDCO-UNDERSEAS DRILLING LTD 1901 N Akard Cumberland Hill Dallas TX 75201 214-653-8700
SERVICE EQUIPMENT & ENGINEERING INC 900 Dunn St Houma LA 70360 504-868-9010
DEAN SHANK DRILLING CO 2908 Engineers Rd Belle Chasse LA 70037 504-392-1685
SKINNER MARINE OPERATIONS LTD PO Box 46 San Fernando Trinidad West Indies 65-77265
A/S SMEDVIG DRILLING CO PO Box 110 4001 Stavanger Norway (04) 5-20040
SOMAD (SODINT MARINE DRILLING CO) c/o Saipem SpA Box 12072 S Donato Milanese 20097 (Milano) Italy 02.5201
SONAT OFFSHORE DRILLING INC GROUP PO Box 2765 Houston TX 77001 713-871-7500
SOUTH SEAS DRILLING CO PO Box 1401 Orange CA 92668 714-558-1300
SOUTHEASTERN DRILLING SERVICE INC 1901 N Akard Cumberland Hill Dallas TX 75201 214-653-8700
SOUTHEASTERN OCEAN DRILLING CO SA 1901 N Akard Cumberland Hill Dallas TX 75201 214-653-8700

TELEDYNE MOVIBLE OFFSHORE INC PO Box 31936 Lafayette LA 70503 318-981-7100
TEMPLE DRILLING CO 3300 Capital Bank Plaza Houston TX 77002 713-759-0960
TRANSOCEAN DRILLING CO LTD PO Box 25861 Oklahoma City OK 73125 405-270-2804
TRANSWORLD DRILLING CO PO Box 25861 Oklahoma City OK 73125 405-270-2804
TRIANGLE DRILLING LTD Rua da Gloria 290 - 10 20241 Rio de Janeiro - RJ Brazil (021) 221-0860
TROPIC DRILLING CO 17150 Butte Creek Rd Ste 200 Houston TX 77090 713-444-3970
TWO R DRILLING CO PO Box 1968 Houma LA 70361 504-876-6987
UNDERWATER GAS DEVELOPERS LTD PO Box 426 Port Colborne ON L3K 1B7 Canada 416-894-1731

WELL SERVICES LTD PO Box 152 San Fernando Trinidad West Indies 649-7531
WESTERN OCEANIC INC 515 S Post Oak Rd Houston TX 77027 713-629-2723
WESTERN OFFSHORE DRILLING AND EXPLORATION CO 3333 Michelson Dr Irvine CA 92730 714-975-7034
WHALEN DRILLING INC Rt B Box 390 W-2 Acadiana Regional Airport New Iberia LA 70560 318-364-6613
WILH WILHELMSEN Roald Amundsens Gate 5 Oslo 1 Norway
ZAPATA OFFSHORE CO Zapata Tower PO Box 4240 Houston TX 77210 512-226-6497

International Contract Offshore Drilling Rigs

AFRICA

Contractor And • Rig Name or No.	Type •	BOP Stack Size (ID) •	BOP Stack Pressure Rating, 1,000 psi •	Drawworks Make And Model •	Rated Depth With 4½-in. Pipe, 100 ft. •	Rated Water Depth •	Status •
ANGOLA							
Dyvi Offshore AS/Dyvi Gamma	JU	13.63	10	Nat 1320UE	200	350	Drilling
Forex Neptune and/or Affil/Trident IX	JU	13.63	10	G-D 1500E	217	400	Drilling
Global Marine Drlg/Glomar Adriatic I	JU	13.63	10	Nat 1625DE	250	300	Drilling
Global Marine Drlg/Glomar Adriatic II	JU	13.63	10	Nat 1625DE	250	300	Drilling
Reading & Bates/Douglas Carver	DS	20.00	10	Nat 1625DE	250	750	Drilling
Sedco Inc/Sedco 135G	SS	13.63	10	Oiwl E3000	250	800	Drilling
Sedco Inc/Sedneth Luanda	JU	13.63	10	Nat 1320UE	200	200	Drilling
CABINDA							
Sedco Inc/Sedco 150	JU	13.63	5	C-E A800RE	100	150	Drilling
Sedco Inc/Sedco 251	JU	13.63	10	C-E C2	200	250	Drilling
CAMEROON							
Coflor/Navifor I	T	16.75	5	Nat 1320UE	200	350	Drilling
Coflor/Navifor II	T	13.63	5	Nat 1320UE	200	400	Standby
Diamond M/Barge 44	BP	13.63	5	Oiwl E3000	250	18	Stacked
Diamond M/Diamond M Don E McMahon	JU	13.63	10	Oiwl E2000	250	100	Drilling
Foramer/Ile de la Reunion	T	13.63	5	Nat 110DE	160	250	Drilling
Forex Neptune and/or Affil/Searex 2	T	11.00	10	G-D 500E	110		Drilling
Forex Neptune and/or Affil/Trident 7A	JU	13.63	10	G-D 1500E	217	132	Drilling
Western Oceanic/Western Polaris I	JU	13.63	10	Nat 1320UE	200	250	Drilling
CONGO							
Coflor/Navifor III	T	16.75	5	Nat 1320UE	200	400	Drilling
Foramer/Ile de Re	T	16.75	5	Nat 1320DE	200	300	Drilling
Foramer/Ile de Sein	T	16.75	5	Nat 1320DE	200	400	Drilling
Reading & Bates/F G McClintock	JU	20.00	10	Oiwl E3000	250	300	Drilling
EGYPT							
Dixilyn-Field Drlg/82	JU	13.63	5	Nat 1320UE	200	250	Drilling
Egyptian Drlg/EDC Rig 22	P	13.63	5	C-E WS1B	170		
Egyptian Drlg/4				Nat 110	130		
Foramer/Ile d'Amsterdam	JU	13.63	10	Nat 1320UE	200	300	Drilling
Forex Neptune and/or Affil/Trident 6	JU	13.63	10	G-D 1500E	217	300	Drilling
Global Marine Drlg/Glomar Adriatic VIII	JU	13.63	10	Nat 1625DE	250	300	Drilling
Global Marine Drlg/Glomar High Island II	JU	13.63	10	Nat 1320UE	200	250	Drilling
Interocean Drlg SA/Interocean III	JU	13.63	10	Nat 1320UE	200	300	Drilling
Japan Drlg/Hakuryu I	JU	13.63	5	Niigata N3000	135	110	Drilling
Ocean Drlg & Expl/Ben Ocean Typhoon	DS	13.63	5	Nat 1320UE	250	600	Drilling
Ocean Drlg & Expl/Ocean Tide	JU	13.63	10	Nat 1320DE	250	250	Drilling
Penrod Drlg/95	JU	13.63	10	Nat 1320UE	250	250	Drilling
Reading & Bates/E W Thornton	DS	20.00	5	Oiwl E3000	255	600	Stacked
Reading & Bates/Roger W Mowell	JU	13.63	10	Nat 1625DE	250	300	Drilling
Reading & Bates/W B Tyson	JU	13.63	10	Nat 1625DE	250	300	Drilling
Saipem/5834	P	14.00	5	Idco E2100	200		Drilling
Saipem AG/Texas Star	JU	13.63	5	Nat 110UE	160	150	Workover
Santa Fe Drlg/Rig 105	JU	21.25	5	C-E C2	200	250	Drilling
Santa Fe Drlg/Santa Fe Mariner I	SS	16.75	5	Nat 1320UE	200	600	Drilling
Santa Fe Drlg/136	JU	13.63	10	Nat 1320UE	200	250	Drilling
Santa Fe Drlg/141	JU	13.63	10	Oiwl E2000	200		Drilling
Sonat Offshore Drlg Inc Group/Discover 1/ Rig 22	T	12.00	3	Nat 80B	120	600	Drilling
Sonat Offshore Drlg Inc Group/Discoverer 511	DS	18.75	10	Idco E2100	200	2000	Stacked
Sonat Offshore Drlg Inc Group/Offshore Aquarius	JU	13.63	10	Oiwl E2000	200	250	Drilling
Sonat Offshore Drlg Inc Group/Offshore Comet	JU	13.63	10	Nat 1320UE	200	250	Drilling
Western Oceanic/Western Triton I	JU	13.63	10	Nat 1320UE	200	250	Drilling
GABON							
Coflor/Navifor Norse	DS	16.63	10	Nat 1320UE	200	600	Drilling
Dixilyn-Field Drlg/83	JU	13.63	10	Nat 1320UE	200	250	Stacked
Foramer/Asterie	SS	18.75	10	G-D 2100DE	250	800	Drilling
Foramer/Ile d'Ouessant	T	10.00	5	Idco H525	80	380	Workover
Foramer/Ile de la Martinique	T	16.75	5	Nat 1320DE	200	360	Drilling
Foramer/Shiloh	T	16.75	5	Nat 1320DE	200	450	Drilling
Forex Neptune and/or Affil/Neptune 7 Pentagone 81	SS	13.63	10	Nat 1320UE	240	880	Stacked
Forex Neptune and/or Affil/Pentagone 82	SS	18.75	10	C-E C3UE	200	1050	Stacked
Forex Neptune and/or Affil/Searex I	T	16.75	5	G-D 1100E	180		Drilling
Global Marine Drlg/Glomar High Island III	JU	13.63	10	Nat 1320UE	200	250	Drilling
Global Marine Drlg/Glomar Main Pass I	JU	13.63	10	Nat 1625DE	250	300	Drilling
Keydril/Key Gibraltar	JU	13.63	10	Oiwl E2000	250	300	Drilling
Ocean Drlg & Expl/Ocean Ruler	JU	13.63	5	Nat 1625EU	250	250	Stacked
Transworld Drlg/46	S	13.63	5	C-E EDA460	200	70	Stacked
IVORY COAST							
J L Offshore/Dan Duke	JU	13.63	10	Nat 1320UE	200	300	Drilling
Southeastern Drlg Serv/Sedco J	SS	21.25	2	Oiwl E3000	250	600	Drilling
LIBYA							
Saipem/Scarabeo 3	SS	18.75	10	Nat 1625	250	1300	Drilling
Saipem/Scarabeo 4	SS	18.75	10	Nat 1625	250	1300	Drilling
NIGERIA							
Atwood Oceanics Pacific/Richmond	S	20.00	2	Nat 1320UE	200	70	Drilling
Diamond M/Barge 45	BP	13.63	10	Oiwl E3000	250	18	Drilling
Forex Neptune and/or Affil/Belle Isle	B	13.63	5	C-E 1500UE	217		Drilling
Forex Neptune and/or Affil/Lutece	B	13.63	5	Idco 2500E	254		Drilling
Forex Neptune and/or Affil/Neptune 1	JU	13.63	5	Nat 1625DE	240	257	Stacked
Forex Neptune and/or Affil/Trident IV-A	JU	13.63	10	G-D 2100E	254	300	Stacked
Forex Neptune and/or Affil/Trident 8	JU	13.63	10	G-D 1500E	217	300	Drilling

AFRICA (Cont'd)

Contractor And • Rig Name or No.	Type •	BOP Stack Size (ID) •	BOP Stack Pressure Rating, 1,000 psi •	Drawworks Make And Model •	Rated Depth With 4½-in. Pipe, 100 ft. •	Rated Water Depth •	Status •
NIGERIA (Cont'd)							
Keydril/Key Bermuda	JU	13.63	10	Oiwl 2000	200	200	Drilling
Keydril/Key Largo	JU	13.63	10	Oiwl E300	250	300	Drilling
Odfjell Drlg & Consulting/Amazone	JU						Drilling
Santa Fe Drlg/Swamp Master R-83	B	20.00	5	Idco 2500E	200	22	Stacked
Santa Fe Drlg/Swamp Queen R-84	B	20.00	5	Nat 1320	200	22	Stacked
Sedco Inc/Sedco 252	JU	13.63	10	Oiwl E2000	200	250	Drilling
Sedco Inc/Sedco 253	JU	13.63	10	C-E C2	200	250	Drilling
Western Offshore Drlg & Expl/Mr Sage	JU	13.63	5	Nat 1320UE	200	200	Drilling
SENEGAL							
Santa Fe Drlg/Calabar Queen Rig 83	T	20.00	5	Idco E1200	120		Stacked
SOUTH AFRICA							
Sedco Maritime/Sedco K	SS	21.25	10	Oiwl E3000	250	900	Drilling
TANZANIA							
Blocker Drlg & Marine/Vermilion Bay	B	13.63	10		300		Stacked
TUNISIA							
Global Marine Drlg/Glomar High Island VIII	JU	13.63	10	Nat 1320UE	200	250	Drilling
Sedco Inc/Sedco H	SS	18.75	10	Oiwl 3000	250	800	Drilling
ZAIRE							
Keydril/Key Victoria	JU	13.63	5	Oiwl E2000	200	250	Drilling

ASIA PACIFIC

Contractor And • Rig Name or No.	Type •	BOP Stack Size (ID) •	BOP Stack Pressure Rating, 1,000 psi •	Drawworks Make And Model •	Rated Depth With 4½-in. Pipe, 100 ft. •	Rated Water Depth •	Status •
AUSTRALIA							
Atwood Oceanics Pacific/Energy Searcher	DS	18.75	10	G-D 3000E	250	1500	Drilling
Atwood Oceanics Pacific/Regional Endeavour	DS	18.75	10	Nat 1320UE	200	1500	Drilling
Diamond M/Epoch	SS	16.75	10	Oiwl E3000	300	1200	Drilling
Global Marine Drlg/Glomar Main Pass III	JU	13.63	10	Nat 1625DE	250	300	Drilling
Keydril/Key Biscayne	JU	13.63	5	Nat 1320UE	200	250	Drilling
Loffland Bros/95	P	13.63	5	MC U1220	200		Drilling
Maersk Drlg/Maersk Valiant							Drilling
Ocean Drlg & Expl/Ocean Digger	SS	18.75	10	C-E A1500	250	600	Drilling
Ocean Drlg & Expl/Ocean Prospector	SS	18.75	10	C-E C3 Type II	250	1000	Drilling
Richter Drlg Pty/10	P	13.63	5	Nat 110UE	180		Drilling
Richter Drlg Pty/12	P	13.63	5	Nat 110UE	180		Drilling
South Seas Drlg/Southern Cross	SS	18.75	10	Oiwl E2000	200	1500	Drilling
BRUNEI							
Reading & Bates/Harvey H Ward	JU	13.63	10	Nat 1625	250	300	Drilling
Reading & Bates/I J Pierce	PT	20.00	5	Oiwl 840E	180		Drilling
Reading & Bates/J W Nickle	PT	20.00	5	Oiwl 840E	180		Drilling
Sedco Inc/Sedco 135-E	SS	20.00		Oiwl 3000	250	600	Drilling
Southeastern Ocean Drlg/Sedco 135-A	SS	13.63	5	Oiwl 3000	250	600	Drilling
BURMA							
Forex Neptune and/or Affil/Trident 1	JU	13.63	10	G-D 1500UE	217		Drilling
CHINA							
Global Marine Drlg/Glomar Java Sea	DS	18.75	10	Nat 1625DE	250	1000	Drilling
INDIA							
Atwood Oceanics Pacific/Gettysburg	B	18.75	10	Nat 1320	200	600	Drilling
Atwood Oceanics Pacific/Shenandoah	JU	13.63	10	C-E C2	200	300	Drilling
Dixilyn-Field Drlg/95	SS	18.75	10	Nat 1625DE	250	600	Drilling
Griffin-Alexander Drlg/G-A I	JU	13.63	10	MC EB1220	250	200	Drilling
Reading & Bates/J W Bates	DS	20.00	10	Nat 1320UE	200	600	Stacked
Reading & Bates/W T Adams	JU	13.63	10	Nat 1525E	250	300	Drilling
Sedco Intl SA/Sedco 445	DS	16.75	10	Oiwl E3000	250	3000	Drilling
Western Oceanic/Western Triton II	JU	13.63	10	Nat 1320	200	250	Drilling
Zapata Offshore/Miss Kitty	JU	13.63	10	Nat 1625	250	300	Drilling
INDONESIA							
Atwood Oceanics Pacific/Margie	SS	18.75	10	Nat 1320	200	600	Drilling
Dual Offshore/Rig 32	JU	13.63	5	Oiwl E2000	200	300	Drilling
Dual Offshore/Rig 42	JU	13.63	5	Oiwl E2000	200	300	Drilling
Forex Neptune and/or Affil/Gavrinis (Rig 37)	B	13.63	5	Nat 110UE	217	25	Drilling
Forex Neptune and/or Affil/Izenah (Rig 38)	B	13.63	5	Nat 110UE	217	25	Drilling
Global Marine Drlg/Glomar Conception	DS	18.75	10	Nat 1625DE	250	600	Drilling
Global Marine Drlg/Glomar Robert F Bauer	DS	18.75	10	Nat 1625DE	250	2500	Drilling
Ocean Drlg & Expl/Ocean Hurricane	DS	16.75	10	Nat 1625	250	600	Stacked
Penrod Drlg/84	JU	13.63	10	Nat 1320UE	25	250	Drilling
Penrod Drlg/93	JU			Nat 1320UE	250	250	Drilling
Penrod Drlg/94	JU	13.63	10	Nat 1320UE	25	250	Drilling
Reading & Bates/Chris Seger	JU	29.50	10	Idco 2500	200	210	Drilling
Reading & Bates/D K McIntosh	JU	30.00	10	Nat 1320	200	250	Drilling
Reading & Bates/Dickson M Saunders	JU	20.00	5	Nat 80B	150	160	Stacked
Reading & Bates/J W McLean	JU	20.00	10	Nat 130	200	225	Drilling
Rowan Intl/Rowan Fairbanks	B	13.63	5	Nat 1320UE	250	20	Drilling
Santa Fe Drlg/Santa Fe Explorer	JU	20.00	5	MC U914	150	180	Drilling
Santa Fe Drlg/124	JU	13.63	5	Nat 1625DE	200	250	Drilling
Santa Fe Drlg/127	JU	13.63	5	Nat 1320UE	200	250	Drilling
Santa Fe Drlg/134	JU	21.25	10	Nat 1320UE	200	250	Drilling
Transocean Drlg/Transocean No 7	JU	13.63	10	C-E C3 Type II	250	300	Drilling
Western Oceanic/Apollo 1	JU	13.63	10	C-E C3	200	300	Drilling
Zapata Offshore/Enterprise (35)	JU			C-E C3 Type II			Drilling
Zapata Offshore/32	JU	13.63	10	Nat 1320	200	250	Drilling

ASIA PACIFIC (Cont'd)

Contractor And • Rig Name or No.	Type •	BOP Stack Size (ID) •	BOP Stack Pressure Rating, 1,000 psi •	Drawworks Make And Model •	Rated Depth With 4½-in. Pipe, 100 ft. •	Rated Water Depth •	Status •
JAPAN							
Dyvi Offshore AS/Dyvi Stena	SS	18.75	15	C-E C3	250	200	Under Construction
Japan Drlg/Hakuryu II	SS	20.75	5	C-E C311	300	656	Drilling
Japan Drlg/Hakuryu V	SS	18.75	10	C-E C311	300	1640	Drilling
JFP Well Serv/JFP Eleven	JU	13.38	10	Oiwl E2000	300	350	Under Repair
Keydril/Key Hawaii	JU	13.63	10	Nat 1625DE	250	300	Under Construction
KOREA							
Houlder Marine Drlg/High Seas Driller	SS	18.75	15	Nat 1625E	250/ 5"	1500	Under Construction
Reading & Bates/Jim Cunningham	SS	18.75	10	Nat 1625DE	250	1500	Drilling
Santa Fe Drlg/135	SS	18.75	10	Oiwl E3000	250	1500	Under Construction
Santa Fe Drlg/140	SS	18.75	10	Oiwl E3000	250	1500	Under Construction
Sedco Inc/Sedco-712	SS	18.75	15	Oiwl E3000	250	1500	Under Construction
Sedco Inc/Sedco-714	SS	18.75	15	Oiwl E3000	250	1500	Under Construction
MALAYSIA							
Atlantic Drlg/Benlomond	DS	18.75	10	C-E C2	200	1000	En Route
Dolphin Titan Intl/140	T	13.63	10	Nat 1320UE	200	225	Drilling
Forex Neptune and/or Affil/Grand Large	T	13.63	5	G-D 1500UE	217	250	Drilling
Loffland Bros/46	P	13.63	5	MC U914CE	180		Stacked
Loffland Bros/47	P	13.63	5	MC U914	180		Drilling
Reading & Bates/Charley Graves	PT	20.00	10	Nat 1320UE	250		Drilling
Reading & Bates/D R Stewart	JU	13.63	10	Oiwl E3000	250	300	Drilling
PHILIPPINES							
Penrod Drlg/74	SS	13.63	10	Nat 1625DE	300	1700	Stacked
SINGAPORE							
Atwood Oceanics Pacific/Chancellorsville	DS	18.75	10	C-E C2	200	1000	Drilling
Atwood Oceanics Pacific/Mission Viking	B	18.75	10	Nat 1625DE	200	600	Stacked
Atwood Oceanics Pacific/Shiloh	T	18.75	5	Nat 1320UE	200	400	Drilling
Global Marine Drlg/Glomar Adriatic IV	JU	13.63	10	Nat 1625DE	250	300	Under Construction
Global Marine Drlg/Glomar Grand Isle	DS	18.75	10	Nat 1625 DE	250	600	Stacked
Global Marine Drlg/Glomar Tender III	T	13.63	5	Nat 1625DE	250		Stacked
Houston Offshore Intl/Sabine V	JU	13.63	10	Nat 1320UE	200	200	Stacked
J L Offshore/Dan Queen	SS	18.75	10	Nat 1320UE	200	1000	Stacked
J L Offshore/Damwood Ice	DS	18.75	10	Nat 1320UE	200	1000	Stacked
Japan Drlg/Hakuryu III	SS	18.75	10	C-E C3111	300	1000	Undesignated
Japan Drlg/Hakuryu IV	JU	13.63	10	Nat 1625DE	250	295	Undesignated
JFP Well Serv/JFP Seven	JU	13.63	1	Oiwl E2000	250	300	Stacked
Rowan Intl/Rowan-Morgan City (Fxd Ht)	B	13.63	5	Nat 1320UE	250	20	Stacked
Sonat Offshore Drlg Inc Group/Discoverer III	DS	16.75	5	Nat 1625	200	600	Stacked
Transworld Drlg/71	JU	13.63	10	C-E C3 Type II	250	250	Stacked
Western Oceanic/Western Pacesetter IV	SS	18.75	10	C-E C3 Type II	250	1500	Under Construction
Western Offshore Drlg & Expl/Western Offshore IV	B	16.75	5	Nat 1320DE	200	600	Stacked
Western Offshore Drlg & Expl/Western Offshore VII	B	16.75	5	G-D 2100RE	250	600	Stacked
TAIWAN							
Western Offshore Drlg & Expl/Western Offshore VIII	DS	16.75	5	Nat 1625DE	250	600	Drilling
THAILAND							
Great Eastern Drlg & Engrg/Eastern Princess	PT	13.63	5	C-E C2	250	400	Drilling
Great Eastern Drlg & Engrg/Eastern Queen	PT	13.63	5	C-E C2	250	400	Drilling
Great Eastern Drlg & Engrg/Seacrest	DS	18.75	10	Oiwl E3000	250	105	Drilling
Reading & Bates/W D Kent	P	13.63	5	Nat 1320UE	250		Drilling

CANADA

Contractor And • Rig Name or No.	Type •	BOP Stack Size (ID) •	BOP Stack Pressure Rating, 1,000 psi •	Drawworks Make And Model •	Rated Depth With 4½-in. Pipe, 100 ft. •	Rated Water Depth •	Status •
UNDESIGNATED							
Canadian Marine Drlg/Canmar Explorer I	DS	18.75	10	Idco 2100E	250	600	Drilling
Canadian Marine Drlg/Canmar Explorer II	DS	18.75	10	Idco 2100E	250	600	Drilling
Canadian Marine Drlg/Canmar Explorer III	DS	18.75	10	Nat 1625DE	250	1500	Drilling
Canadian Marine Drlg/Canmar Explorer IV	DS	18.75	10	C-E C3	200	607	Drilling
Canadian Marine Drlg/CBIR #1	SS	20.75	3	C-E C3	250	26	Stacked
Canadian Marine Drlg/CBIR #2	SS	20.75	3	Nat 1625DE		26	Drilling
Global Marine Drlg/Glomar Labrador I	Oth	13.63	15	Nat 1625DE	250	300	Under Construction
Marine Drlg SA/Sedco 709	SS	18.75	10	Oiwl E3000	250	6000	Drilling
Sedco Maritime/Sedco 706	SS	18.75	10	Oiwl E3000	250	1300	Drilling
Smedvig Drlg/West Venture	SS	18.75	10	C-E 3C	300	1200	Drilling
Sonat Offshore Drlg Inc Group/John Shaw	SS	18.75	10	C-E C3 Type II	250	1500	Drilling
Underwater Gas Dev/Mr Neil	JU	10.00	3	Idco H525D	80	80	Stacked
Underwater Gas Dev/Telesis	DS	8.00	2	Nat T20	50	210	Drilling
Underwater Gas Dev/Timesaver II	JU	8.00	2	C-E GB250	50	100	Workover
NEWFOUNDLAND							
Zapata Offshore/Zapata Ugland	SS	13.63	10	Oiwl E3000	250	600	Drilling
PRINCE EDWARD ISLAND							
Global Marine Drlg/Glomar High Island IX	JU	13.63	10	Nat 1320	200	250	Drilling
SABLE ISLAND							
Rowan Co/Rowan Juneau	JU	13.63	15	Nat 1625	250	300	Drilling
Zapata Offshore/31	JU	13.63	15	Nat 1625DE	250	200	Drilling

CENTRAL AMERICA

Contractor And • Rig Name or No.	Type •	BOP Stack Size (ID) •	BOP Stack Pressure Rating, 1,000 psi •	Drawworks Make And Model •	Rated Depth With 4½-in. Pipe, 100 ft. •	Rated Water Depth •	Status •
MEXICO							
Perforaciones Alta Mar CA/Rig III	T			Nat 130	206		Drilling
Perforadora Mexico SA/D/B Reforma	DS	18.75		Nat 1625DE	250	600	Drilling
Perforadora Mexico SA/D/B Revolucion	DS	18.75	10	Nat 1625DE	250	600	Drilling
Perforadora Mexico SA/Reforma	DS	18.75	10	Nat 1625DE	250	600	Drilling
Perforadora Mexico SA/Revolucion	DS	18.75	10	Nat 1625DE	250	600	Drilling

EUROPE

Contractor And • Rig Name or No.	Type •	BOP Stack Size (ID) •	BOP Stack Pressure Rating, 1,000 psi •	Drawworks Make And Model •	Rated Depth With 4½-in. Pipe, 100 ft. •	Rated Water Depth •	Status •
UNDESIGNATED							
Wilh Wilhelmsen/Treasure Saga	SS						Under Construction
BELGIUM							
Foramer (Offshore Europe)/Petrel		16.75	10	Nat 1625DE	250	2000	Standby
DENMARK							
Dyvi Offshore AS/Dyvi Beta	JU	13.63	10	Nat 1320UE	200	350	Drilling
Dyvi Offshore AS/Dyvi Epsilon	JU	13.63	10	Nat 1320UE	200	210	Drilling
J L Offshore/Dan Earl	JU	13.63	10	Nat 1320UE	200	205	Drilling
Maersk Drlg/Maersk Endeavour							Drilling
Maersk Drlg/Maersk Explorer	JU	13.63	10	Nat 1320UE	250		Drilling
FRANCE							
Dyvi Offshore AS/STC Descartes	JU	13.63	10	Nat 1625E	200	350	Stacked
Foramer/Barracuda	T	16.75	5	Nat 1320DE	200	400	Under Construction
Ocean Drlg Serv/Sedco 601	SS	18.75	10	C-E C2	200	1500	Drilling
Sonat Offshore Drlg Inc Group/Discover Seven Seas	DS	16.75	10	C-E C3 Type II	250	6000	Drilling
GREECE							
J L Offshore/Dan Baron	DS	18.75	10	Idco E3000	200	1000	Stacked
IRELAND							
Diamond M/Diamond M Hunter	SS	18.75	10	Oiwl E3000	300	1500	Drilling
Dyvi Offshore AS/Dyvi Alpha	SS	18.75	10	Nat 1625DE	250	1250	Drilling
Southeastern Drlg Serv/Sedco 704	SS	18.75	10	Oiwl 3000	250	1500	Drilling
ITALY							
Chiles Drlg/Texas Star	JU	13.63	10	Nat 110UE	160	150	Under Repair
Foramer/Pelican	DS	13.63	10	Nat 1625DE	250	1100	Drilling
Global Marine Drlg/Glomar Grand Banks	DS	18.75	10	Nat 1625DE	250	600	Drilling
Maersk Drlg/Maersk Endurer	JU	13.63	10	Oiwl E2000	200	250	Stacked
Maersk Drlg/Maersk Viking							Drilling
Penrod Drlg/58	JU	13.63	10	Nat 1625DE	300	210	Drilling
Reading & Bates/Mr Jack	JU	20.00	10	Oiwl E3000	250	300	Drilling
Saipem/Perro Negro	JU	13.63	10	Idco PE2500	210	130	Drilling
Saipem/Saipem Due	DS	16.75	5	Nat 1625	250	1000	Drilling
Saipem/Scarabeo II	SS	18.75	10	Idco PE2500	210	600	Drilling
Saipem/53	P	13.63	5	Idco H525D	70		Stacked
Saipem/90	P	13.58	10	Idco E2100	250		Drilling
Somad-Sodint Marine Drlg/Perro Negro 2	JU	13.58	10	Oiwl E2000	210	300	Drilling
Somad-Sodint Marine Drlg/Perro Negro 3	JU	13.58	10	Idco E2100	210	300	Under Construction
Sonat Offshore Drlg Inc Group/Offshore Taurus	JU	13.63	5	MC U1220BE	200	250	Drilling
MALTA							
Pacnorse Drlg/Pacnorse I	DS	18.75	10	C-E C3 Type II	300	5000	Stacked
Santa Fe Drlg/Mariner 2	SS	16.75	5	Nat 1320UE	200	600	Stacked
NETHERLANDS							
Deutsche Tiefbohr/T-38 D	M	11.00	10	Wits 75	130/ 3.5"		Workover
Dixilyn-Field Drlg/DF-87	JU	13.63	10	Nat 1320UE	250	300	Drilling
Dyvi Offshore AS/Dyvi Sigma	JU	13.63	10	Nat 1320UE	200	210	Drilling
Global Marine Drlg/Glomar Adriatic III	JU	13.63	10	Nat 1625DE	250	300	Drilling
Global Marine Drlg/Glomar Biscay I	SS	18.75	10	Oiwl E3000	250	1500	Stacked
J L Offshore/Dan King	JU	13.63	10	Nat 1320UE	200	205	Drilling
Penrod Drlg/64	JU	13.63	10	Nat 1625DE	300	210	Drilling
Penrod Drlg/67	JU	13.63	10	Nat 1625DE	300	210	Drilling
Penrod Drlg/90	JU	13.63	10	Nat UE	300	210	Stacked
Penrod Drlg/81	JU	13.63	10	Nat 1320UE	250	210	Drilling
Rowan Intl/Cecil Provine	JU	13.63	10	Nat 1625	250	300	Drilling
Transocean Drlg/Transocean No 1	JU	11.00	10	C-E A1500E	200	140	Drilling
Transocean Drlg/Transocean No 2	JU	13.63	10	Nat 1625DE	200	150	Drilling
Transocean Drlg/Transocean No 4	JU	13.63	10	Nat 1320UE	250	180	Stacked
Transocean Drlg/Transocean No 6	JU	13.63	10	C-E C3 Type II	200	300	Stacked
Western Oceanic/Western Triton IV	JU	13.63	10	C-E C2	200	250	Stacked
Zapata Offshore/Zapata Nordic	JU	13.63	10	C-E C3 Type II	200	300	Drilling
NORWAY							
Dyvi Offshore AS/Dyvi Delta	SS	18.75	10	Oiwl E3000	250	1500	Drilling
Golar-Nor Offshore AS/Neptuno Nordraug	SS	18.75	10	Nat 1625DE	200/ 5"	1000	Drilling
Golar-Nor Offshore AS/Nortrym	SS	18.75	10	Nat 1625DE	200	1000	Drilling
Intl Chandlers/Sedco PSSI	SS					1500	Maintenance
Morco AS/1/6 A	P	13.63	10	Nat 1320UE			Drilling
Morco AS/2/4 C	P	13.63	5	Oiwl 940E			Workover
Morco AS/2/4 E	P	13.63	5	C-E C3			Workover
Morco AS/2/4 F	P	13.63	10	Nat 1320UE			Workover
Morco AS/2/7 C	P	13.63	5	MC U1220B			Workover
Morco AS/7/11-A	P	13.63	5	Idco E2100			Workover
Morco AS/2/7 A-10	P	16.75	5	Oiwl 940E			Workover
Morco AS/2/7 A-32	P	16.75	5	Nat 110UE			Workover

EUROPE (Cont'd)

NORWAY (Cont'd)

Contractor And • Rig Name or No.	Type •	BOP Stack Size (ID) •	BOP Stack Pressure Rating, 1,000 psi •	Drawworks Make And Model •	Rated Depth With 4½-in. Pipe, 100 ft. •	Rated Water Depth •	Status •
Morco AS/2/4 Alpha	P	13.63	5	C-E A1500E			Drilling
Morco AS/2/4 Bravo	P	13.63	5	C-E A1500E			Workover
Morco AS/2/4 Delta	P	13.63	5	C-E C2			Workover
Morco AS/2/7 Bravo	P	13.63	5	MC U1220EB			Workover
Odfjell Drlg & Consulting/Deepsea Bergen	SS	18.75	10	Nat 1625DE	250	1500	Drilling
Odfjell Drlg & Consulting/Deepsea Saga H-3	SS	18.75	10	Nat 1625DE	250		Stacked
Odfjell Drlg & Consulting/101 Statfjord "B"	SS	13.63	5	Nat 1320UE	250	1750	Drilling
Ross Drlg/Koldnes No 219 Ross Isle	Oth	18.75	10	Olwl E3000	250	1500	Under Construction
Ross Drlg/Neptuno Nordraug	Aker H3	18.75	10	Nat 1625DE	250	1000	Drilling
Ross Drlg/Ross Rig	Aker H3	18.75	10	Nat 1625DE	250	1250	Contracted
Smedvig Drlg/West Vanguard	SS	18.75	10	C-E 3000	250	1500	Drilling
With Wilhelmsen/Treasure Scout	SS					2500	Drilling
With Wilhelmsen/Treasure Seeker SS H-3	SS		15	C-E C3 Type II	250	1250	
With Wilhelmsen/Treasure Swan	SS					2500	Drilling

PORTUGAL

Contractor And • Rig Name or No.	Type •	BOP Stack Size (ID) •	BOP Stack Pressure Rating, 1,000 psi •	Drawworks Make And Model •	Rated Depth With 4½-in. Pipe, 100 ft. •	Rated Water Depth •	Status •
Sedco Inc/Sedco 472	DS	16.75	10	Olwl E3000	250	6000	Stacked

SPAIN

Contractor And • Rig Name or No.	Type •	BOP Stack Size (ID) •	BOP Stack Pressure Rating, 1,000 psi •	Drawworks Make And Model •	Rated Depth With 4½-in. Pipe, 100 ft. •	Rated Water Depth •	Status •
KCA Drlg/MV Polly Bristol	DS	18.75	10	Nat 1625DE	250	3000	Drilling
Ocean Drlg & Expl/Ocean Endeavour	SS	18.75	10	C-E C3 Type II	250	1000	Drilling
Ocean Drlg & Expl/Ocean Voyager	SS	13.63	5	C-E C3 Type II	250	1200	Drilling
Sedco Inc/Sedco I	SS	16.75	5	Olwl E3000	250	1000	Production
Western Offshore Drlg & Expl/Western Offshore III	B	13.63	10	Nat 1320DE	200	600	Stacked

UNITED KINGDOM

Contractor And • Rig Name or No.	Type •	BOP Stack Size (ID) •	BOP Stack Pressure Rating, 1,000 psi •	Drawworks Make And Model •	Rated Depth With 4½-in. Pipe, 100 ft. •	Rated Water Depth •	Status •
Atlantic Drlg/Bendoran Aker H-3	SS	21.25	2	Nat 1625DE	250	850	Drilling
Atlantic Drlg/Benurackie	SS	21.25	2	Nat 1625DE	250	850	Drilling
Atlantic Drlg/Ocean Benloyal	SS	13.63	10	Nat 1625DE		660	Drilling
Bawden Drlg (UK)/32	P	10.00	3	Olwl 700	90		Drilling
Bawden Drlg (UK)/34	P	13.63	5	Nat 1320UE	220		Drilling
Bawden Drlg (UK)/35	P	16.63	5	Nat 1320UE	200		Drilling
Bawden Drlg (UK)/39	P	13.63	5	Nat 1320UE	220		Drilling
Bawden Drlg (UK)/40	P	13.63	5	Nat 1320UE	200		Drilling
Bawden Drlg (UK)/41	P	13.63	5	Nat 1320UE	200		Drilling
Bawden Drlg (UK)/42	P	13.63	5	Nat 1320UE	220/ 5"		Drilling
Canmar Intl/Sovereign Explorer	SS	18.75	15	Nat 1625E	280	2000	Under Construction
Deutsche Tiefbohr/T-20	P	13.63	10	Nat 1320UE	180	480	Drilling
Deutsche Tiefbohr/T-21	P	13.63	10	Nat 1320UE	180	480	Drilling
Deutsche Tiefbohr/T-25	P	13.63	10	Nat 1320UE	180	510	Drilling
Dixilyn-Field Drlg/96	SS	18.75	10	Nat 1625	250	1200	Drilling
Dixilyn-Field Drlg/97	SS	18.75	10	C-E C1112	250	1200	Drilling
Dyvi Offshore AS/Dyvi Omega	SS	18.75	10	Olwl E3000	250	1500	Drilling
Forex Neptune and/or Affil/Drill Star	SS	18.75	15	Nat 1625DE	250	1500	Drilling
Forex Neptune and/or Affil/Pentagone 84	SS	13.63	10	G-D 3000E	240	660	Drilling
Global Marine Drlg/Glomar Biscay II	SS	18.75	10	Nat 1625DE	250	600	Drilling
Houlder Marine Drlg/Bay Driller	JU	18.63	5	Nat 80UE			Drilling
Houlder Marine Drlg/Shelf Driller	JU	13.63	10	Nat 1625E	250/ 5"	300	Stacked
Jebsens Offshore Drlg/Aladdin	SS	20.00	2	Olwl E3000	250	600	Completion
Jebsens Offshore Drlg/Ali Baba	SS	18.75	10	Nat	250	1000	Completion
Jebsens Offshore Drlg/Sinbad Saxon	SS	13.63	10	Olwl E3000	250	600	Drilling
Keydrill/Galveston Key	JU	13.63	10	C-E C3	250	300	Stacked
Kingsnorth Marine Drlg/Dundee Kingsnorth Aker H-3	SS	18.75	10	Nat 1625DE	240		Drilling
Kingsnorth Marine Drlg/Kingsnorth UK Aker H-3	SS	18.75	10	Nat 1625DE	240		Drilling
KCA Drlg/51	P	13.63	5	Nat 1320UE	200		Drilling
KCA Drlg/52	P	13.63	5	Nat 1320UE	200		Drilling
KCA Drlg/53	P	13.63	5	Nat 1320UE	200		Under Construction
Loffland Bros/43	P	13.63	10	Idco E3000	200		Drilling
Loffland Bros/81	P	13.63	5	MC U1220EB	200		Drilling
Loffland Bros/82	P	13.63	5	MC U1220EB	200		Drilling
Loffland Bros/83	P	13.63	5	MC U1220EB	200		Drilling
Loffland Bros/84	P	13.63	5	MC U1220EB	200		Drilling
Ocean Drlg & Expl/Ocean Bounty	SS	16.75	10	C-E C3 Type II	250	1200	Stacked
Ocean Drlg & Expl/Ocean Kokuei	SS	13.63	10	C-E C3 Type II	250	600	Drilling
Ocean Drlg & Expl/Ocean Liberator	SS	18.75	10	Nat 1625DE	250	1000	Drilling
Ocean Drlg & Expl/Ocean Victory	SS	13.63	10	C-E C3 Type II	250	600	Drilling
Odfjell Drlg & Consulting/STC Cicero	JU	13.63	1	Nat 1620DE	250	285	Drilling
Penrod Drlg/85	JU	13.63	10	Nat 1320UE	250	250	Drilling
Penrod Drlg/92	JU			Nat 1320UE	250	220	Drilling
Reading & Bates/M G Hulme Jr	SS	18.75	10	Nat 1625	250	1500	Drilling
Rowan Intl/Arch Rowan	JU	13.63	10	Nat 1625	250	300	Stacked
Rowan Intl/Charles Rowan	JU	13.63	10	Nat 1625	250	300	Drilling
Rowan Intl/Gilbert Rowe	JU	13.63	10	Nat 1625	250	300	Drilling
Santa Fe Drlg/Britannia R-65	JU	20.00	10	Nat 1320DE	200	180	Drilling
Santa Fe Drlg/Rig 111/112 Thistle	P	21.75	5	Olwl 3000E	200		Drilling
Santa Fe Drlg/82	P	20.00	5	Nat 1320UE	200		Drilling
Sea Drlg Netherlands/Sedneth 701	SS	21.25	10	Olwl E3000	250	1500	Drilling
Sedco Inc/Sedco/BP-711	SS	13.63	15	Olwl E3000	250	1500	Drilling
Sonat Offshore Drlg Inc Group/Chris Chenery	SS	13.63	10	Nat 1625DE	250	600	Drilling
Southeastern Drlg Serv/Sedco 700	SS	21.25	10	Olwl E3000	250	1500	Drilling
Southeastern Drlg Serv/Sedco 703	SS	18.75	10	Olwl 3000	250	2000	Drilling
Southeastern Drlg Serv/Sedco 707	SS	21.25	2	Olwl E3000	250	2000	Drilling
Transworld Drlg/58	SS			C-E C3000	250	600	Production
Western Oceanic/Apollo II	JU	13.58	10	C-E C3	200	300	Drilling
Western Oceanic/Western Pacesetter I	SS	18.75		Nat 1625DE	250	600	Drilling
Western Oceanic/Western Pacesetter II	SS	18.75	10	Nat 1625DE	250	1200	Drilling
Western Oceanic/Western Pacesetter III	SS	18.75	10	C-E C311	250	1200	Stacked

WEST GERMANY

Contractor And • Rig Name or No.	Type •	BOP Stack Size (ID) •	BOP Stack Pressure Rating, 1,000 psi •	Drawworks Make And Model •	Rated Depth With 4½-in. Pipe, 100 ft. •	Rated Water Depth •	Status •
Deutsche Tiefbohr/T-24		13.63	10	Nat 80BUE	130		Stacked

MIDDLE EAST

QATAR

Contractor And • Rig Name or No.	Type •	BOP Stack Size (ID) •	BOP Stack Pressure Rating, 1,000 psi •	Drawworks Make And Model •	Rated Depth With 4½-in. Pipe, 100 ft. •	Rated Water Depth •	Status •
Forex Neptune and/or Affil/Trident II	JU	13.63	10	G-D 2100RE	254	350	Drilling
Santa Fe Drlg/Rig 103	JU	20.00	5	C-E C2	200	250	Drilling

SAUDI ARABIA

Contractor And • Rig Name or No.	Type •	BOP Stack Size (ID) •	BOP Stack Pressure Rating, 1,000 psi •	Drawworks Make And Model •	Rated Depth With 4½-in. Pipe, 100 ft. •	Rated Water Depth •	Status •
Arabian Drlg/Arabdrill 2	T			Nat 110	190		Drilling
Arabian Drlg/AD 8	JU	13.63	5	Nat 110UE	190	150	Drilling
Loffland Bros/Ocean Master V/Rig 210	JU			MC U914EC	180	160	Drilling
Loffland Bros/Ocean Master VI/Rig 220	JU			MC U914EC	180	160	Drilling
Loffland Bros/Ocean Master VII/Rig 230	JU			MC U914EC	180	160	Drilling
Loffland Bros/Ocean Master VIII/Rig 240	JU			MC U914EC	180	160	Drilling
Loffland Bros/Oceanmaster III-R-150	JU	13.66	3	MC U712A	140	160	Stacked
Loffland Bros/Orville Fisher/Rig 183	P	13.63	5	MC U914C	180		Stacked
Maersk Drlg/Maersk Venturer							Drilling
Maersk Drlg/Maersk Voyager							Drilling
Reading & Bates/Ron Tappmeyer	JU	13.63	10	Olwl E3000	200	300	Drilling
Rowan Intl/Rowan Anchorage	JU	13.63	5	Nat 1320UE	250	225	Drilling
Rowan Intl/Rowan-New Orleans	JU	13.63	5	Nat 1324UE	250	225	Stacked
Sonat Offshore Drlg Inc Group/Jubilee	JU	13.63	5	C-E A1500E	200	200	Drilling
Sonat Offshore Drlg Inc Group/North Star	JU	13.63	5	Nat 1320DE	200	250	Drilling
Sonat Offshore Drlg Inc Group/Offshore Bahram	JU	13.63	5	Idco ED1200	120	200	Drilling

UNITED ARAB EMIRATES

Contractor And • Rig Name or No.	Type •	BOP Stack Size (ID) •	BOP Stack Pressure Rating, 1,000 psi •	Drawworks Make And Model •	Rated Depth With 4½-in. Pipe, 100 ft. •	Rated Water Depth •	Status •
Atwood Oceanics Pacific/Bull Run	T	13.63	5	Nat 1320UE	200	400	Drilling
Atwood Oceanics Pacific/Williamsburg	PT	13.63	10	C-E C	200	500	Drilling
Foramer/Ile de France	JU	13.63	5	Nat 1625DE	250	200	Drilling
Foramer/Ile du Levant	JU	13.63	5	Nat 1320DE	200	150	Drilling
Foramer (Interdrill)/Tourmalines	JU	10.00	5	Nat 80B	120	100	Workover
Forex Neptune and/or Affil/Trident 5	JU	10.00	5	Idco E900	120	150	Workover
Forex Neptune and/or Affil/Trident-III	JU	13.63	5	G-D 2100E	254	300	Stacked
Japan Drlg/Hakuryu VI	JU	13.63	5	Nat 1320UE	200	180	Drilling
Japan Drlg/Hakuryu VII	JU	13.63	10	Nat 1320UE	200	150	Drilling
Japan Drlg/Hakuryu 8	JU	13.63	10	Nat 1320UE	200	186	Drilling
Loffland Bros/Ocean Master IV/Rig 160	JU	13.66	3	MC U914	180	110	Drilling
Maersk Drlg/Maersk Vanguard	JU	13.63	10	Olwl E2000	200/ 5"	300	Drilling
Maersk Drlg/Maersk Victory							Drilling
National Drlg/Al Ghallan	JU	13.63	5	Nat 1320UE	20	150	Drilling
National Drlg/Al Ittihad	JU	13.63	5	Nat 1320UE	200	150	Drilling
National Drlg/Al Yasat	JU	13.63	5	Nat 1320UE	200	150	Drilling
National Drlg/Diyina	JU	13.63	5	Nat 1320UE	200	150	Drilling
National Drlg/Junana	JU	13.63	10	Nat 1320UE	200	150	Drilling
National Drlg/Yemilah	JU	13.63	10	Nat 1320UE	200/ 5"	200	Drilling
Ocean Drlg Serv/Sedco 160	JU	13.63	10	C-E C2	250	180	Drilling
Ocean Drlg Serv/Sedneth II	JU	13.63	10	Olwl 3000E	250	200	Drilling
Ocean Drlg Serv/Sedneth 201	JU	13.63	10	C-E C2	250	200	Drilling
Ocean Drlg Serv/Sedneth 202	JU	13.63	10	C-E C2	250	200	Drilling
Ocean Drlg Serv/75	JU	13.63	5	Olwl 96	180	100	Drilling
Sonat Offshore Drlg Inc Group/Enterprise	JU	18.63	2	Nat 130			Drilling
Sonat Offshore Drlg Inc Group/Hustler	JU	12.00	5	C-E A550	100	90	Drilling
Sonat Offshore Drlg Inc Group/Offshore Antares	JU	10.00	5	Nat 130	120	115	Drilling
Sonat Offshore Drlg Inc Group/Offshore Jupiter	JU	13.63	5	C-E C1 Type II	160	130	Drilling
Sonat Offshore Drlg Inc Group/Offshore Mercury	JU	13.63	10	Nat 1320DE	200	250	Drilling
Sonat Offshore Drlg Inc Group/Rig 54	JU	13.63	5	Nat 130E	200	150	Drilling
Transocean Drlg/Transocean No 5	JU	13.63	10	Nat 1625	250	300	Drilling
Transworld Drlg/63	JU	13.63	5	C-E C3 Type II	250	250	Drilling
Western Oceanic/Apollo III	JU	13.63	10	C-E C3II	200	300	Drilling
Western Oceanic/Apollo IV	JU	13.63	10	C-E C350	200	400	Drilling
Western Offshore Drlg & Expl/Western Offshore V	B	16.75	5	Nat 1320DE	200	600	Stacked
Zapata Offshore/Bonito II	JU	13.63	10	Nat 1625	250	300	Drilling
Zapata Offshore/Chaparral	JU	13.63	10	Olwl 3000E	250	240	Drilling
Zapata Offshore/Heron	JU	13.63	10	Nat 1625DE	250	300	Drilling
Zapata Offshore/Topper II	JU	13.63	5	Nat 110UE	165	115	Drilling
Zapata Offshore/33	JU	13.63	10	Nat 1320	200	250	Drilling

NORTH SEA

UNDESIGNATED

Contractor And • Rig Name or No.	Type •	BOP Stack Size (ID) •	BOP Stack Pressure Rating, 1,000 psi •	Drawworks Make And Model •	Rated Depth With 4½-in. Pipe, 100 ft. •	Rated Water Depth •	Status •
Ocean Drlg & Expl/Benloyal	SS					1100	Drilling

SOUTH AMERICA

ARGENTINA

Contractor And • Rig Name or No.	Type •	BOP Stack Size (ID) •	BOP Stack Pressure Rating, 1,000 psi •	Drawworks Make And Model •	Rated Depth With 4½-in. Pipe, 100 ft. •	Rated Water Depth •	Status •
Reading & Bates/George H Galloway	JU	13.63	10	Nat 1625DE	250	300	Under Construction
Rio Colorado S A/Rio Colorado I	JU	13.63	5	Nat 1320UE	200	300	Drilling

BRAZIL

Contractor And • Rig Name or No.	Type •	BOP Stack Size (ID) •	BOP Stack Pressure Rating, 1,000 psi •	Drawworks Make And Model •	Rated Depth With 4½-in. Pipe, 100 ft. •	Rated Water Depth •	Status •
Dolphin Titan Intl/141	P	13.63	5	MC U1220EB	250	300	Drilling
Forex Neptune and/or Affil/Neptune Gascogne	JU	13.63	10	Nat 1625UE	250	290	Drilling
Global Marine Drlg/Glomar High Island V	JU	13.63	10	Nat 1320UE	200	250	Drilling
Griffin-Alexander Drlg/G-A IV	JU	13.63	10	MC EB1220	250	200	Stacked
Interocean Drlg SA/Interocean Discoverer	DS	18.75	10	C-E C2 Type II	250	1500	Drilling
Interocean Drlg SA/Interocean II	JU	13.63	10	C-E C2	200	300	Drilling
Keydrill/Key West	JU	13.63	10	C-E C3	250	350	Drilling
Maersk Drlg/Maersk Pioneer SS	SS	18.75	10	C-E C2 Type II	200		Drilling
Marlin Drlg/Marlin 14	JU	13.63	1	Nat 1625DE	250	150	Drilling
Ocean Drlg & Expl/Ocean Cyclone	DS	16.75	5	Nat 1625	250	800	Drilling
Ocean Drlg & Expl/Ocean Zephyr	SS	21.25	10	C-E C3 Type II	250	600	Drilling
Ocean Drlg & Expl/Zephyr II	SS	21.25	10	C-E C3 Type II	250	600	Drilling
Odebrecht Perfuracoes/Norbe I	JU	13.63	10	Nat 1320UE	250	300	Drilling
Penrod Drlg/59	JU	13.63	10	Nat 1625DE	300	220	Drilling

SOUTH AMERICA (Cont'd)

Contractor And • Rig Name or No.	Type •	BOP Stack Size (ID) •	BOP Stack Pressure Rating, 1,000 psi •	Drawworks Make And Model •	Rated Depth With 4½-in. Pipe, 100 ft. •	Rated Water Depth •	Status •
BRAZIL (Cont'd)							
Penrod Drlg/62	JU	13.63	10	Nat 1625DE	300	330	Drilling
Penrod Drlg/71	SS	13.63	10	Nat 1625	300	1000	Drilling
Penrod Drlg/72	SS	13.63	10	Nat 1625DE	300	300	Drilling
Penrod Drlg/75	SS	13.63	10	Nat 1625DE	300	2000	Drilling
Reading & Bates/C E Thornton	JU	20.00	10	DWS E3000	250	300	Stacked
Sedco Inc/Sedco 135-F	SS	13.63	10	Olwl 3000E	250	800	Production
Sedco Intl SA/Sedco 135-D	SS	16.75	5	Olwl 3000E	250	800	Production
Sonat Offshore Drlg Inc Group/Discover 534	DS	16.75	10	Nat 1625DE	250	3000	Drilling
Sonat Offshore Drlg Inc Group/Orion	JU	13.63	10	Nat 1320DE	200	275	Drilling
Transworld Drlg/61	SS	13.63	10	C-E A1500E	200	600	Production
Triangle Drlg/Norbe II	JU	13.63	10	Olwl 3000E	250	300	Drilling
Tropic Drlg/DS Tainaron	DS	18.75	10	Nat 1320UE	300	1000	Stacked
CHILE							
Diamond M/Magallanes	JU	13.63	5	Olwl E3000	250	150	Drilling
Diamond M/Nugget	JU	13.63	5	Olwl E3000	300	300	Drilling
TRINIDAD							
Dolphin Titan Intl/130	P	13.63	10	G-D 2100E	250		Drilling
Santa Fe Drlg/Bluewater No 3	SS	16.75	10	Nat 1625DE	250	600	Stacked
Skinner Marine Operations/Skinmar I	P	13.63	10	Olwl E2000	200	185	Stacked
Skinner Marine Operations/Skinmar IV	P	13.63	5	Olwl 840E	160	185	Stacked
Skinner Marine Operations/Skinmar V	P	13.63	5	Olwl 760E	120		Stacked
Skinner Marine Operations/Skinmar VI	P	13.63	5	Olwl 760E	120		Drilling
Skinner Marine Operations/Skinmar VII	P	13.63	5	Olwl 840E	160	88	Drilling
Well Services/6	P	13.63	6	Nat 80B	120		Drilling
Well Services/7	P	13.63	6	S/B 4210	80	85	Drilling
Well Services/10				Nat C125	140		Drilling
VENEZUELA							
Loffland Bros/R-71-WO	B			Idco H25			Drilling
Loffland Bros/V-101	B	6.00	5	Idco 711	100		Stacked
Loffland Bros/V-105	B	10.00	5	MC U914B	160		Drilling
Loffland Bros/V-114	B	10.00	5	MC U914C	160		Stacked
Perforaciones Alta Mar CA/Rig I	T			Nat 1625	200		Drilling
Santa Fe Drlg/Orinoco I (R132)	B	21.25	10	Olwl E2000	200	20	Stacked
Santa Fe Drlg/Reina Del Lago	B	12.00	3	Nat 80E	140	100	Drilling
Santa Fe Drlg/Rey Del Lago	B	12.00	3	Nat 80E	140	100	Drilling
Sonat Offshore Drlg Inc Group/Estrellita/T-27	JU	13.63	5	Nat 1320	100	150	Stacked
Sonat Offshore Drlg Inc Group/Polarcub/Lama	JU	12.00	5	Nat 110	150	100	Stacked
Sonat Offshore Drlg Inc Group/Rig 60/OV-1	JU	10.00	5	C-E A1100E	140	100	Stacked
Western Offshore Drlg & Expl/Western Offshore IX	DS	18.75	10	Nat 1625DE	250	750	Drilling

UNITED STATES

Contractor And • Rig Name or No.	Type •	BOP Stack Size (ID) •	BOP Stack Pressure Rating, 1,000 psi •	Drawworks Make And Model •	Rated Depth With 4½-in. Pipe, 100 ft. •	Rated Water Depth •	Status •
ALABAMA-MOBILE							
Atlantic Pacific Marine/10	B	13.63	10	Olwl E2000	250	20	Drilling
ALABAMA-MOBILE BAY							
Chiles Drlg/Seabee	JU	13.63	10	Nat 1625DE	250	250	Drilling
Penrod Drlg/202	S			Nat 1320UE	250		
ALASKA-UNDESIGNATED							
Rowan Co/Rowan Middletown	JU	13.63	10	Nat 1625		300	Stacked
Sedco Maritime/Sedco 708	SS	18.75	10	Olwl E3000	250	2000	Drilling
ALASKA-YAKUTAT							
Ocean Drlg & Expl/Ocean Odyssey	SS					1500	Drilling
CALIFORNIA-UNDESIGNATED							
Challenger Drlg/#30 EOS				Nat 1320DE	220		Drilling
CRC Mallard Well/35					100		Stacked
Diamond M/Diamond M Eagle	SS	18.75	10	Olwl E3000	300	2000	Drilling
Diamond M/Diamond M Falcon	SS	18.75	10	Olwl E3000	300	2000	En Route
Diamond M/Diamond M General	SS	18.75	10	Olwl E3000	300	1500	Drilling
JFP Well Serv/JFP Three	JU	13.63	10	Olwl E2000	250	300	Drilling
Ocean Drlg & Expl/Ben Ocean Lancer	DS	16.75	10	G-D 3000E	250	3000	Stacked
Penrod Drlg/73	SS			Nat 1625DE	300		
Penrod Drlg/96	JU			Nat 1320UE	250		
Santa Fe Drlg/Choctaw I	SS	18.75	10	Nat 1320UE	200	800	En Route
Sedco Maritime/Sedco 702	SS	21.25	10	Olwl E3000	250	1200	Drilling
CALIFORNIA-LOS ANGELES							
Keydril/Key Singapore	JU	13.63	10	Nat 1625	250	300	Drilling
CALIFORNIA-SANTA BARBARA							
Rowan Co/Rowan-Alaska	JU	13.63	10	Nat 1625DE	300	350	Drilling
CALIFORNIA-SANTA BARBARA CHNL							
Global Marine Drlg/Glomar Atlantic	DS	18.75	10	Nat 1625DE	250	2000	Drilling
Global Marine Drlg/Glomar Pacific	DS	16.75	10	Nat 1625DE	250	2000	Drilling
Global Marine Drlg/Glomar Platform I	P	13.63	5	Nat 110UE	160		Drilling
Global Marine Drlg/Glomar Platform II	P	13.63	5	Nat 110UE	160		Drilling
CALIFORNIA-SANTA MARIA BASIN							
Zapata Offshore/Zapata Concord	SS	18.75	10	Olwl E3000	250	2000	Drilling
FLORIDA-SANTA ROSA							
Atlantic Pacific Marine/12	B	13.63	5	Olwl E2000	250	13	Drilling
LOUISIANA-UNDESIGNATED							
Atlantic Pacific Marine/8	B	13.63	10	Olwl 2000	250	20	Stacked
Bokenkamp Drlg/Rig #1	P	13.63	10	Olwl E2000	250		Stacked
Bokenkamp Drlg/Rig #2	P	13.63	10	Olwl E2000	250		Drilling

UNITED STATES (Cont'd)

Contractor And • Rig Name or No.	Type •	BOP Stack Size (ID) •	BOP Stack Pressure Rating, 1,000 psi •	Drawworks Make And Model •	Rated Depth With 4½-in. Pipe, 100 ft. •	Rated Water Depth •	Status •
LOUISIANA-UNDESIGNATED (Cont'd)							
Bokenkamp Drlg/Rig #3	P	13.63	10	Olwl E2000	250		Stacked
Bokenkamp Drlg/Rig #4	P	13.63	10	Olwl E2000	250		Drilling
Broughton Drlg/Broughton II	JU	13.63	10	Olwl E3000	300	105	Stacked
Diamond M/Barge 14	B	10.00	5	C-E J1400	200	12	Stacked
Diamond M/Barge 26	B	10.00	5	Olwl 2000	200	12	Standby
Diamond M/Barge 40	B	10.00	5	Olwl 2000	250	12	Stacked
Diamond M/Century	SS	18.75	10	Olwl E3000	300	600	Drilling
Diamond M/Gem	JU	13.63	5	Olwl E3000	300	300	Under Repair
Diamond M/42	BP	10.00	5	Olwl 2000	250	18	Stacked
Diamond M/66	P	13.63	5	C-E A1500E	200		Stacked
Dolphin Titan Intl/101	JU	6.00	5	Idco H35D	150	10-70	Stacked
Dolphin Titan Intl/103	JU	10.00	5	Idco H35D	150	70	Stacked
Dolphin Titan Intl/104	JU	10.00	5	Idco H35D	150	70	Workover
Dolphin Titan Intl/123	P	13.63		Idco E1700	200		Stacked
Dolphin Titan Intl/124	P	13.63	5	C-E U1220EB	200		Stacked
Dolphin Titan Intl/126	P	13.63	5		250		Stacked
Dolphin Titan Intl/127	P	13.63	10	C-E C3 Type II	250		Stacked
Dolphin Titan Intl/142	P	13.63	10	C-E A1500	200		Stacked
Dolphin Titan Intl/143	T	13.63	10	C-E A100E	160		Stacked
Global Marine Drlg/Glomar Coral Sea	DS	18.75	10	Nat 1625DE	250	1500	Drilling
Global Marine Drlg/Glomar High Island I	JU	13.63	10	Nat 1320UE	200	250	Drilling
Global Marine Drlg/Glomar High Island IV	JU	13.63	10	Nat 1320UE	200	250	Drilling
Global Marine Drlg/Glomar High Island VI	JU	13.63	10	Nat 1320UE	200	250	Drilling
Global Marine Drlg/Glomar High Island VII	JU	13.63	10	Nat 1320UE	200	250	Drilling
Global Marine Drlg/Glomar Main Pass II	JU	13.63	10	Nat 1625DE	250	300	Drilling
Global Marine Drlg/Glomar Main Pass IV	JU	13.63	10	Nat 1625DE	250	300	Drilling
Harris Well Serv/16	B	7.16	5	MC U36A	100	12	Stacked
Helmerich & Payne Intl Drlg/90	P	13.63	5	Olwl E2000	200		Drilling
Helmerich & Payne Intl Drlg/91	P	13.63	5	Olwl 2000	200		Drilling
Helmerich & Payne Intl Drlg/100	P	13.63	10	Olwl E3000	300		Drilling
Livingston Oilwell Serv/5 Workover	B	6.00	5	Wils Mogul 42		10	Stacked
Livingston Oilwell Serv/11 Workover	P	2.50	5	Wils Super			Stacked
Livingston Oilwell Serv/14 Workover	B	6.00		Wils Super 38		10	Stacked
Livingston Oilwell Serv/16 Workover	P	2.50	5	Wils Super			Stacked
Livingston Oilwell Serv/18 Workover	B	7.06	5	Wils Mogul 42	80	12	Stacked
Livingston Oilwell Serv/20 Workover	B	2.50	5	Wils Super 38		10	Stacked
Livingston Oilwell Serv/903 Workover	P	2.50	5	Wils Super			Stacked
Livingston Oilwell Serv/22 (Drilling)	B	11.00	5	Wils Super Giant	120	12	Stacked
Loffland Bros/74	P	13.63	5	MC U1220BE	220		Drilling
Mayronne/M-142	P	13.63	5	S/B N12	160		Stacked
Mayronne/M-152	P	13.63	5	S/B N20	160		Stacked
Mayronne/M-162	P	13.63	10	Nat 1320UE	200		Stacked
Mayronne/M-172	P	13.63	10	Nat 1320UE	200		Stacked
Nicklos Drlg/27	P			Nat 110UE	160		Stacked
Nicklos Drlg/82	P			Olwl E2000	200		Drilling
Noble Drlg/Barge 3	B			Nat 1320UE	200		Stacked
Noble Drlg/Barge 4	B			Nat 160S	250		Stacked
Noble Drlg/PB-2	B			Olwl E3000	250		Stacked
Ocean Drlg & Expl/Ocean Chief	JU	13.63	5	C-E A1500	250	225	Stacked
Ocean Drlg & Expl/Ocean Driller	SS	13.63	10	C-E C2	250	600	Stacked
Ocean Drlg & Expl/Ocean Explorer	SS	13.63	5	C-E EDES	250	600	Stacked
Ocean Drlg & Expl/Ocean Leader	JU	13.63	5	Nat 130	250	175	Stacked
Ocean Drlg & Expl/Ocean Queen	SS	13.63	5	C-E A1500	250	1200	Stacked
Ocean Drlg & Expl/Ocean Star	JU	13.63	5	Nat 1320UE	250	175	Stacked
Ocean Drlg & Expl/Ocean 66	JU	13.63	5	C-E C3 Type I	250	120	Stacked
Ocean Drlg & Expl/Odeco Seven	S	13.63	5	Idco E2500	250	35	Stacked
Platform Well Serv/7	P	6.00	5	OIME 750	7500		Stacked
Platform Well Serv/8	P	10.00	5	OIME 750	7500		Stacked
Rowan Co/Rowan Louisiana	JU	13.63	10			300	Stacked
Sanders Drlg/1	B			C-E A800	140		Stacked
Sanders Drlg/2	B			S/B N12A	250		Stacked
Santa Fe Drlg/Swamp Chief R-86	B	13.63	5	Nat 110UE	160	22	Stacked
Service Equipment & Engrg/5	P	10.00		OIME 750	100		Stacked
Service Equipment & Engrg/6	P	10.00		OIME 750	100		Stacked
Service Equipment & Engrg/9	P	10.00		OIME 750	100		Stacked
Service Equipment & Engrg/10	P	10.00		OIME 750	100		Stacked
Service Equipment & Engrg/11	P	13.63	5	Idco E900	140		Stacked
Service Equipment & Engrg/12	P	13.63	500	Idco E900	140		Stacked
Sonat Offshore Drlg Inc Group/Offshore Pegasus	JU	10.00	5	Nat 110	160	125	Drilling
Teledyne Movible Offshore/Rig 20	JU	13.63	10	C-E C3	250	250	Stacked
Teledyne Movible Offshore/2	S	12.00		Nat 1625DE	250	70	Stacked
Teledyne Movible Offshore/3	S	13.63	10	C-E EDES	200	45	Stacked
Teledyne Movible Offshore/5	P	13.63	5	Nat 1320D	200		Stacked
Teledyne Movible Offshore/6	P	13.63	5	Nat 1320DE	200		Completion
Teledyne Movible Offshore/14	P	10.00	5	G-D RE500	80		Drilling
Teledyne Movible Offshore/17	JU	13.63	10	C-E 1C3	250	250	Stacked
Teledyne Movible Offshore/18	JU	13.63	10	MC U1220EB	250	250	Stacked
Teledyne Movible Offshore/19	JU	13.63	10	C-E 1C3	250	250	Stacked
Temple Drlg/Apache	JU	13.63	10	Olwl E3000	250	55	Drilling
Temple Drlg/Cheyenne	JU	13.63	10	Olwl E2500	250	200	Drilling
Temple Drlg/Comanche	JU	13.63	10	Olwl E2000	250	150	Drilling
Transworld Drlg/59	JU	13.63	5	Nat 1320UE	200	125	Stacked
Transworld Drlg/62	JU	13.63	10	C-E C3 Type II	250	300	Stacked
Transworld Drlg/64	JU	13.63	10	Olwl E3000	250	300	Stacked
Transworld Drlg/66	S	13.63	10	C-E C3 Type II	250	100	Stacked
Whalen Drlg/1	B	13.63	5	Nat 1320UE	250	12	Drilling
Zapata Offshore/Endeavour	JU	13.63	10	C-E CE3000E	200	215	Stacked
Zapata Offshore/Intrepid	JU	13.63	10	Unit U1220B	200	300	Stacked
Zapata Offshore/Rig 30	P			MC U1220EB			Stacked
LOUISIANA-ASSUMPTION							
Rebstock Drlg/4	B	13.63	5	Olwl 860	180	12	Drilling
LOUISIANA-BAYOU GAUCHE							
CRC Mallard Well/14	B	6.00	5	Wils 90	120	14	
LOUISIANA-BRETON SOUND							
Ocean Drlg & Expl/Ocean King	JU	13.63	10	Nat 1625	250	300	Drilling
Transworld Drlg/44	S	13.63	5	Idco 1350S	180	40	Drilling

UNITED STATES (Cont'd)

Contractor And • Rig Name or No.	Type •	BOP Stack Size (ID) •	BOP Stack Pressure Rating, 1,000 psi •	Drawworks Make And Model •	Rated Depth With 4½-in. Pipe, 100 ft. •	Rated Water Depth •	Status •
LOUISIANA-CAMERON							
CRC Mallard Well/Barge 3	B			Nat 55	90		Workover
Diamond M/Barge 16	B	13.63	5	Idco E2500	250	12	Drilling
Dixilyn-Field Drlg/50 Gulf of Mexico	B	10.00	5	Nat 130	250	8	Drilling
Eagle Offshore Drlg Serv/Eagle M-101	B	13.63	10	Olwl E3000	300	20	Drilling
Goldrus Marine Drlg/Goldrus Marine 1	B	13.63	10	Olwl 3000E	300	20	Drilling
Goldrus Marine Drlg/Goldrus Marine 2	B	13.63	10	Olwl 3000E	300	20	Stacked
Goldrus Marine Drlg/Goldrus Marine 4	B	13.63	10	Olwl 3000E	300	20	Stacked
Quarles Drlg/17	B	11.00	10	Nat 160E	250	20	Drilling
Savage Drlg/Ponca	JU	13.00	10	Nat 1320UE	250	150	Stacked
Two R Drlg/Two-16	B			C-E C3	250	12	Drilling
LOUISIANA-EAST CAMERON							
Booker Drlg/14	P	10.00	5	G-D 3000			Drilling
Chiles Drlg/Platfor[illegible]	P	13.63	10	Nat 1320UE	200		Drilling
Dixilyn-Field Drlg/85 Gulf of Mexico	JU	13.63	10	Nat 1320UE		200	Drilling
Huthnance Drlg/Vanguard II	JU	13.63	10	C-E U1220EB	250	300	Drilling
Marlin Drlg/Marlin No 1 Tender Type	P	13.63	5	Nat 1320DE	200		Drilling
Ocean Drlg & Expl/Ocean Champion	JU	13.63	10	Nat 1625DE	250	250	Drilling
LOUISIANA-EUGENE ISLAND							
Atlantic Pacific Marine/Ranger IV	JU	10.00	5	Olwl 660	90	73	Workover
Cactus Intl/103	P	13.63	5	Olwl E2000	250		Drilling
Diamond M/93	P	13.63	5	Nat 110	160		Drilling
Fluor Drlg Serv/Rig 63	P	13.63	10	Nat 1320UE	200		Drilling
Griffin-Alexander Drlg/G-A VII	JU	13.63	10	MC EB1220	250	250	Drilling
Keyes Offshore/Keyes - 300	JU	13.63	10	C-E C2	200	300	Drilling
Marine Drlg/J Storm VII	JU	13.63	10	Nat 1625M	250	377	Drilling
Marine Drlg/J Storm VIII	JU	13.63	10	Nat 1320	200	150	Drilling
Marine Drlg/J Storm XVII	JU	13.63	10	Nat 1320M	200	250	Drilling
Noble Drlg/24	P	13.63	10	Nat 1625DE	250		Drilling
Noble Drlg/30	P	13.63	10	G-D 1500E	200		Drilling
Ocean Drlg & Expl/Barge A	S	14.00	5	Idco 2500	250	70	Drilling
Ocean Drlg & Expl/John Hayward	S	10.00	5	C-E EDA	250	30	Drilling
Ocean Drlg & Expl/Mr Charlie	S	13.63	5	C-E EDES	250	40	Drilling
Ocean Drlg & Expl/Ocean Viking	SS	13.63	10	C-E A1500	250	600	Drilling
Penrod Drlg/31	P	13.63	10	Nat 110UE	165	300	Drilling
Penrod Drlg/40	B			Nat 1625DE	300		
Penrod Drlg/45	B			Nat 1625DE	300		
Penrod Drlg/88	JU	13.63	10	Nat 1320UE	250	250	Drilling
Reading & Bates/Leo M Clark	PT	13.63	10	Nat 110M	180		Drilling
Reading & Bates/63	P	13.63	10	Olwl E3000	250		Drilling
Rowan Co/Rowan Fort Worth	JU	13.63	10	Nat 1625	250	300	Drilling
Transworld Drlg/47	S	13.63	10	C-E A1500E	200	70	Stacked
Transworld Drlg/50	JU	13.63	5	Nat 55	120	70	Stacked
Transworld Drlg/65	S	13.63	10	C-E C3 Type II	250	70	Stacked
Transworld Drlg/72	S	13.63	10	Olwl E3000	250	100	Drilling
Zapata Offshore/Louisiana	S	13.63	5	Unit U1220BE	200	50	Drilling
LOUISIANA-EWING BANK							
Zapata Offshore/Zapata Lexington	SS	18.75	10	Olwl E3000	250	2000	Drilling
LOUISIANA-GALLIANO							
CRC Mallard Well/12	B	10.00	5	Wils 90	120	14	
LOUISIANA-GARDEN BANKS							
Dual Marine Drlg/23	P	13.58	10	Olwl E3000	250		Drilling
LOUISIANA-GRAND ISLAND							
Service Equipment & Engrg/4	P	10.00		OIME 500			Drilling
LOUISIANA-GRAND ISLE							
CRC Mallard Well/20	B	10.00	5	Wils 90	120	14	
Diamond M/94	P	13.63	5	Olwl E2000	200		Drilling
Livingston Oilwell Serv/4 Workover	P	2.50	5	Wils Super			Drilling
Livingston Oilwell Serv/8 Workover	P	2.50	5	Wils Super 38			Drilling
Livingston Oilwell Serv/12 Workover	P	2.50	5	Wils Super			Drilling
Livingston Oilwell Serv/15 Workover	P	2.50	5	Wils Super 38			Drilling
Marine Drlg/Stormdrill V	JU	13.63	10	Nat 130	200	115	Drilling
Nordrill Intl/Nordrill Falcon	JU	13.63	10	C-E C2	250	200	Drilling
Penrod Drlg/37	P	13.63	10	C-E C2	250	300	Drilling
Salen Protexa Drlg/Salenergy V	JU	13.63	10	MC U1220BE	200	250	Drilling
LOUISIANA-GREEN CANYON							
Ocean Drlg & Expl/Ocean Rover	SS	13.65	10	C-E C3 Type II	250	600	Drilling
LOUISIANA-GULF OF MEXICO							
Western Oceanic/Nike I	JU	13.63	10	Nat 1320	200	150	Drilling
LOUISIANA-HACKBERRY							
CRC Mallard Well/19	B	10.00	5	Wils 90	120	14	
LOUISIANA-HOPEDALE							
CRC Mallard Well/18	B	10.00	5	Wils 90	120	14	
LOUISIANA-HOUMA							
Loffland Bros/4	P	13.63	5	MC U1220BE	220		Stacked
Loffland Bros/17	P	13.63	5	MC U1220BE	220		Stacked
Loffland Bros/75	P	13.63	5	MC U1220BE	220		Stacked
Loffland Bros/78	P	13.63	5	MC U1220BE	220		Stacked
LOUISIANA-IBERIA							
CRC Mallard Well/Barge 4	B			Nat 80	110		Stacked
CRC Mallard Well/Barge 9	B			Wils 90	110		Stacked
CRC Mallard Well/Mallard 42	P	10.00		Wils 65	140		Stacked
CRC Mallard Well/Mallard 43	P	10.00		Wils 65	140		Stacked
CRC Mallard Well/44	P	10.00		Wils 65	140		Stacked
Glendel Drlg/Mr "A W" #4	B	13.63	10	S/B NE12	250	12	Drilling
Glendel Drlg/Mr Beldon #7	B	13.63	10	S/B NE12	250	20	Drilling
Loffland Bros/Barge 143	B	10.00	5	MC U1220	220		Stacked
LOUISIANA-IBERIA (Cont'd)							
Loffland Bros/Barge 153	B	10.00	5	Beth 1013	150		Stacked
Merit Drlg/3	B	13.63	10	Olwl E2000	250	20	Stacked
Nicklos Drlg/Mr John 21	B			Nat 130	200		Stacked
Phoenix Management/#3-The Mr Ray	B	10.63	10	G-D 2100E	300	8.5	Stacked
LOUISIANA-INTRACOASTAL CITY							
CRC Mallard Well/17	B	10.00	5	Wils 90	140	14	
LOUISIANA-JEFFERSON							
Rebstock Drlg/2	B	10.00	5	Nat N80	140	12	Stacked
Shank Drlg Dean/DS-I	B	10.00	5	Beth 10131500	180	10	Stacked
Two R Drlg/Two R-15	B			C-E C3	250	10	Completion
LOUISIANA-LA ROSE							
Blocker Drlg & Marine/Terrebonne Bay	B	13.63	5	OIME SL9E	200	12	Stacked
LOUISIANA-LAFOURCHE							
Booker Drlg/Rig No 170	P	10.00	5	G-D 500			Stacked
Booker Drlg/8	P	2.50	5	G-D 3000			Stacked
Booker Drlg/11	P	10.00	5	G-D 3000			Stacked
Booker Drlg/15	P	10.00	5	G-D 3000			Stacked
Booker Drlg/50	P	10.00	5	G-D 500			Stacked
Booker Drlg/60	P	10.00	5	G-D 500			Stacked
Booker Drlg/70	P	10.00	5	G-D 500			Stacked
Booker Drlg/80	P	10.00	5	G-D 500			Stacked
Booker Drlg/90	P	6.00	5	G-D 500			Stacked
Booker Drlg/110	P	10.00	5	G-D 500			Stacked
Booker Drlg/120	P	10.00	5	G-D 500			Stacked
Booker Drlg/130	P	10.00	5	G-D 500			Stacked
Booker Drlg/150	P	10.00	5	G-D 500			Stacked
Booker Drlg/160	P	10.00	5	G-D 500			Stacked
Booker Drlg/950	P	13.63	5	G-D 1000	100		Stacked
Booker Drlg/951	P	10.00	5	G-D 1000	80		Stacked
Booker Drlg/952	P	13.63	5	G-D 1000	80		Stacked
Goldrus Marine Drlg/Goldrus Marine 3	B	13.63	10	Olwl 3000E	300	20	Stacked
Houtech Drlg/Houtech JU-I	JU	11.25	10	G-D 700M	100	73	Drilling
Penrod Drlg/Barge 43	B			Nat 1320DE	250	12	Drilling
Penrod Drlg/Barge 48	B	13.63	10	Nat 1625DE	300	20	Drilling
Quarles Drlg/21	B	13.63	10	Olwl 940E	200	30	Drilling
Shank Drlg Dean/DS-2	B	10.00	5	Wils 150-2000	180	10	Drilling
Shank Drlg Dean/DS-3	B	10.00	5	Beth B3661	250	12	Drilling
Two R Drlg/22	B			C-E C3	300	10	Drilling
LOUISIANA-LAKE ARTHUR							
Resource Drlg/W M Keck Sr	B	13.63	5	Nat 160	200		Stacked
LOUISIANA-MAIN PASS							
Booker Drlg/20	P	6.00	5	G-D 500			Drilling
Booker Drlg/100	P	6.00	5	G-D 500			Drilling
Dolphin Titan Intl/122	P	13.63	5	Nat 110UE	160		Drilling
Griffin-Alexander Drlg/G-A II	JU	13.63	10	MC EB1200	250	200	Drilling
Griffin-Alexander Drlg/G-A III	JU	13.63	10	MC EB1200	250	250	Drilling
Noble Drlg/NN-1	JU			G-D 1500	200	12-45	Drilling
Noble Drlg/S-55	SS	13.63	10	Nat 1625DE	250	80	Stacked
Noble Drlg/26	P	13.63	10	Nat 1320UE	200		Drilling
Zapata Offshore/29	P	13.63	10	Olwl E2000	200		Drilling
LOUISIANA-MISSISSIPPI CANYON							
Noble Drlg/#31	P			Olwl E2000	200		Drilling
Penrod Drlg/34	P	13.63	10	Nat 110UE	165	300	Drilling
Zapata Offshore/Saratoga (27)	SS			Olwl E3000			Drilling
Zapata Offshore/Zapata Yorktown	SS	18.75	10	Olwl E3000	250	2000	Drilling
LOUISIANA-MORGAN CITY							
Reading & Bates/Rig 50	P	13.63	10	Nat 1320	180		Stacked
Rowan Intl/Barge 4	B	13.63	10	Nat 1625DE	300	22	Stacked
LOUISIANA-NEW IBERIA							
Temple Drlg/Tejas	B	13.63	10	Idco E3000	300	18	Stacked
LOUISIANA-ORLEANS							
Two R Drlg/Two R-10	B			Nat 1320M	200	10	Drilling
LOUISIANA-PLAQUEMINES							
Atlantic Pacific Marine/7	B	13.63	10	Olwl 2000	250	20	Drilling
Atlantic Pacific Marine/11	B	13.63	10	Olwl E2000	250	13	Drilling
Bay Drlg/Hebert	SS	10.00	5	C-E BL1013	165	10	Drilling
Bay Drlg/Matagorda Bay	SS	10.00	5	C-E BL3661	250	14	Drilling
Bay Drlg/St John	SS	10.00	5	Nat 1625M	250	11	Drilling
CRC Mallard Well/34		6.00			100		Workover
Glendel Drlg/Mr Carl #3	B	13.63	10	S/B NE12	250	12	Drilling
Houtech Drlg/Houtech JU-II	JU	11.25	10	G-D 700M	100	73	Drilling
Phoenix Management/Big Foot One	JU	10.63	10	G-D 2100E	250	85	Stacked
Rebstock Drlg/3	B	10.00	5	G-D 800	130	12	Stacked
Rio Grande Drlg/4	B	13.63	10	Nat 1320M	250	14	Stacked
LOUISIANA-PORT SULPHUR							
CRC Mallard Well/15	B	10.00	5	Wils 90	120	14	
LOUISIANA-QUEEN BESS ISLAND							
Diamond M/46	BP	13.63	10	Olwl E3000	300	18	Drilling
LOUISIANA-SABINE PASS							
Griffin-Alexander Drlg/G-A V	JU	13.63	10	MC EB1220	250	200	Stacked
Houston Offshore Intl/Sabine II	JU	13.63	10	Nat 1320UE	200	200	Stacked
Houston Offshore Intl/Sabine III	JU	13.63	10	Nat 1320UE	200	200	Stacked
Ocean Drlg & Expl/Ocean Traveler	SS	13.63	10	Nat 1625DE	250	600	Drilling
Rowan Co/Rowan Midland	SS	13.63	10	Nat 1625	250	600	Stacked
Salen Protexa Drlg/Salenergy I	JU	13.63	10	MC U1220EB	200	250	Stacked

UNITED STATES (Cont'd)

Contractor And • Rig Name or No.	Type •	BOP Stack Size (ID) •	BOP Stack Pressure Rating, 1,000 psi •	Drawworks Make And Model •	Rated Depth With 4½-in. Pipe, 100 ft. •	Rated Water Depth •	Status •
LOUISIANA-SHIP SHOAL							
Atlantic Pacific Marine/14	B	13.63	5	Olwl E2000	250	13	Drilling
Diamond M/41	BP	10.00	5	Olwl 2000	250	18	Drilling
Keyes Offshore/Keyes - 150	JU	13.63	10	C-E C1	160	150	Drilling
Livingston Oilwell Serv/17 Workover (Concentric)	P	2.50	5	Wils Super 38			Drilling
Marine Drlg/J Storm XIV	JU	13.63	10	Nat 1320	200	200	Drilling
Marlin Drlg/Marlin #9	P	11.00	10	Nat 610E	100		Drilling
Marlin Drlg/Marlin No 2	P	13.63	5	Nat 1320DE	200		Drilling
Ocean Drlg & Expl/Ocean Liberty	JU	10.00	5	Nat 80	120	80	Drilling
Ocean Drlg & Expl/Ocean Pride	JU	13.63	5	Nat 110	250	152	Drilling
Penrod Drlg/35	P	13.63	10	Nat 1320UE	165	300	Drilling
Penrod Drlg/80	JU	13.63	10	C-E C3	300	330	Drilling
Transworld Drlg/54	S	13.63	5	C-E B3661	200	175	Drilling
Zapata Offshore/Rig 8	P	13.63	5	C-E A1100E	150		Drilling
LOUISIANA-SOUTH MARSH							
Huthnance Drlg/Vanguard I	JU	13.63	10	MC U1220EB	250	300	Drilling
LOUISIANA-SOUTH MARSH ISLAND							
Penrod Drlg/87	JU			Nat 1320UE	250		
Penrod Drlg/89	JU			Nat 1320UE	250		
Penrod Drlg/90	JU			Nat 1320UE	250		
Penrod Drlg/201	S			Nat 1320UE	250		
Penrod Drlg/89 Mobil	JU	13.63	10	Nat 1625DE	300	330	Drilling
LOUISIANA-SOUTH PASS							
Booker Drlg/30	P	6.00	5	G-D 500			Drilling
Dolphin Titan Intl/102	JU	6.00	5	Idco H35D	150	70	Drilling
Dual Drlg/39	P	13.63	10	Olwl E3000	250		Drilling
Dual Marine Drlg/24	P	13.58	10	Olwl E2000	250		Drilling
Dual Offshore/12	P	13.58	10	C-E C2	250		Drilling
Helmerich & Payne Intl Drlg/101	P	13.63	5	Nat 110UE	200		
Huthnance Drlg/14	P	13.63	10	MC U1220	250		Drilling
Huthnance Drlg/15	P	13.63	5	MC U1220	250		Drilling
Penrod Drlg/38	P	13.63	10	Nat 1320UE	250	300	Drilling
LOUISIANA-SOUTH PELTO							
Atlantic Pacific Marine/Ranger III	JU	10.00	5	G-D DW500R	90	70	Workover
LOUISIANA-SOUTH TIMBALIER							
Booker Drlg/6	P	2.50	5	G-D 3000			Drilling
Chiles Drlg/Yucatan	JU	13.63	10	Nat 1625DE	300	300	Drilling
Diamond M Drlg/95	P	13.63	5	Olwl E2000	250		Drilling
Fluor Drlg Serv/Mr Dave #61	JU	13.63	10	Nat 1320UE	200	250	Stacked
Fluor Drlg Serv/Mr Si #60	JU	13.63	10	Nat C1625DE	300	350	Stacked
Keyes Offshore/Keyes - 301	JU	13.63	10	C-E 2000	160	300	Drilling
Marine Drlg/J Storm XI	JU	13.63	10	Nat 1320	200	200	Drilling
Ocean Drlg & Expl/Ocean Patriot	JU	13.63	10	Nat 1320ME	250	152	Drilling
Penrod Drlg/36	P	13.63	10	Nat 1320UE	300	300	Drilling
Reading & Bates/Geo M Reading	PT	13.63	10	Idco M2500	200		Drilling
Service Equipment & Engrg/7	P	10.00		OIME 750	100		Drilling
LOUISIANA-ST BERNARD							
Glendel Drlg/Mr George #8	B	13.63	10	G-D 3000	300	25	Stacked
Rebstock Drlg/Rig No 5	B	13.63	5	Nat 1320	200	24	Drilling
Two R Drlg/Two R-14	B			Wils 250	250	20	Completion
LOUISIANA-ST CHARLES							
Quarles Drlg/20	B	11.00	10	Idco E3000	250	18	Drilling
LOUISIANA-ST JOHN THE BAPTIST							
Quarles Drlg/18	B	11.00	10	G-D 800E	140	10	Drilling
LOUISIANA-ST MARTIN							
Challenger Drlg/38 EOS	P	13.63	5	Nat 110	180		Stacked
Diamond M/Rig 47	B	13.63	5	Olwl E3000	250	18	Drilling
LOUISIANA-ST MARY							
Atlantic Pacific Marine/9	B	13.63	10	Olwl E2000	250	20	Drilling
Bay Drlg/Gibbens	SS	10.00	5	Nat 130	180	10	Drilling
Bay Drlg/Mr Harvy	SS	10.00	5	Nat 1625M	250	12	Drilling
CRC Mallard Well/Barge 1	B			Wils 90	90		Workover
Whalen Drlg/2	B	13.63	10	Nat 1625DE	300	20	Drilling
LOUISIANA-ST TAMMANY							
Penrod Drlg/42	B			Nat 1625DE	300		
LOUISIANA-TERREBONNE							
Cliffs Drlg/2	B	13.63	10	MC U1220EB	300	7'6-18	Stacked
Cliffs Drlg/3	B	13.63	10	MC U1220EB	300	7'6-18	Drilling
Houtech Drlg/Houtech JU-III	JU	11.25	10	G-D 700M	100	73	Drilling
Loffland Bros/Barge 154	B	10.00	5	MC U1220	220		Stacked
Merit Drlg/5	B	13.63	10	Olwl E2000	250	20	Stacked
Nicklos Drlg/20 Mr E J	B			Nat 130	200	12	Stacked
Penrod Drlg/41	B			Nat 1625DE	300		Stacked
Penrod Drlg/49	B			Nat 1625DE	300		Stacked
Shank Drlg Dean/4	B			C-E C3	300	12	Drilling
Two R Drlg/Two R-1	B			Beth B3661	250	10	Drilling
Two R Drlg/Two R-12	B			Nat 1625UE	250	12	Drilling
Two R Drlg/Two R-16	B			C-E C3	250	12	Drilling
Two R Drlg/17	B			C-E CEC3	250	22	Completion
Two R Drlg/19	B			C-E C3	250	12	Drilling
Two R Drlg/2R21	B			C-E C3	250	12	Completion
Whalen Drlg/3	B	13.63	10	Nat 1625DE	300	20	Drilling
LOUISIANA-TIDEWATER							
Huthnance Drlg/Rig No 11	P	13.63	5	MC U1220	250		Stacked
LOUISIANA-TIDEWATER DOCKS							
Huthnance Drlg/12	P	13.63	10	MC U1220	250		Stacked
LOUISIANA-TIMBALIER							
Houston Offshore Intl/Sabine IV	JU	13.63	10	Nat 1320UE	200	200	Drilling
LOUISIANA-VERMILION							
CRC Mallard Well/Barge 7	B			Nat 55	110		Workover
CRC Mallard Well/45		10.00		Wils 65	80		Workover
Dixilyn-Field Drlg/84 Gulf of Mexico	JU	13.63	10	Nat 816MI	200	250	Drilling
Dolphin Titan Intl/129	P	13.63	10	C-E C3 Type II	250		Drilling
Glendel Drlg/Mr Glen #1	B	13.63	10	S/B NE12	250	12	Drilling
Griffin-Alexander Drlg/G-A VI	JU	13.63	10	MC EB1220	250	200	Drilling
Keyes Offshore/Keyes - 302	JU	13.63	10	C-E C2	200	300	Drilling
Map Drlg/1	B	7.06	5	Olwl 66	110	8	Drilling
Marine Drlg/J Storm XII	JU	13.63	10	Nat 1320	200	200	Drilling
Marlin Drlg/Marlin #10	P	11.00	10	Nat 610E	100		Drilling
Noble Drlg/PB-3	B			Nat 1625DE	250		Drilling
Noble Drlg/28				G-D 1500E	200		Drilling
Nordrill Intl/Nordrill Oiler	JU	13.63	10	C-E C2	250	200	Drilling
Ocean Drlg & Expl/St Louis	S	13.63	5	C-E EDES	250	30	Drilling
Penrod Drlg/Barge 47	B			C-E A1500E	250	16	Drilling
Penrod Drlg/54	JU	13.63	10	Nat 1625DE	300	300	Drilling
Quarles Drlg/22	B	11.00	10	Olwl E3000	300	23	Drilling
Quarles Drlg/23	B	13.63	10	Olwl E3000	300	28	Drilling
Salen Protexa Drlg/Totonaca	JU	13.63	10	MC U1220BE	200	250	Drilling
Two R Drlg/2R20	B			C-E C3	250	12	Drilling
LOUISIANA-VIOSCA KNOLL							
Diamond M/New Era	SS	18.75	10	Olwl E3000	300	1200	Drilling
LOUISIANA-WEST CAMERON							
Cactus Intl/104	P	13.63	5	C-E Electrohoist II	250		Drilling
Chiles Drlg/Gulf Wind	JU	13.63	10	Nat 1320UE	180	150	Drilling
Chiles Drlg/Platform II	P	13.63	10	Nat 1320UE	200		Drilling
Dixilyn-Field Drlg/D-F 61	P	13.63	5	Nat 1320UE	200	20000	Drilling
Dolphin Titan Intl/125	P	13.63	5	Nat 2320UE	250		Drilling
Fluor Drlg Serv/Mr Mel #59	JU	13.63	10	Nat C1625DE	300	350	Drilling
Houston Offshore Intl/Sabine I	JU	13.63	10	Nat 1320UE	200	200	Drilling
Huthnance Drlg/Charger I	JU	21.25	2	MC U1220EB	250	150	Drilling
Huthnance Drlg/Charger II	JU	13.63	10	MC U1220EB	250	150	Drilling
Marine Drlg/J Storm XV	JU	13.63	10	Nat 1625M	250	250	Drilling
Marlin Drlg/Marlin No 5	P	13.63	10	Nat 1320DE	200		Drilling
Penrod Drlg/82	JU	13.63	10	Nat 1320DE	250	250	Drilling
Penrod Drlg/83	JU	13.63	10	Nat 1320DE	250	250	Drilling
Penrod Drlg/203	S			Nat 1320UE	250		
Salen Protexa Drlg/Zapoteca	JU	13.63	10	MC U1220BE	200	250	Drilling
Western Oceanic/Western Triton III	JU	13.63	10	C-E C2	200	250	Drilling
LOUISIANA-WEST DELTA							
Booker Drlg/10	P	10.00	5	G-D 3000			Drilling
Booker Drlg/140	P	6.00	5	G-D 500			Drilling
CRC Mallard Well/46		13.63		Wils 65	125		Workover
Dixilyn-Field Drlg/76 Gulf of Mexico	S	13.63	5	S/B N12A	200	80	Stacked
Dixilyn-Field Drlg/80 Gulf of Mexico	JU	13.63	10	Nat 1320DE	200	370	Drilling
Dolphin Titan Intl/128	P	13.63	10	C-E C3 Type II	250		Drilling
Dual Offshore/16	P	13.58	5	Nat 1320UE	250		Drilling
Marine Drlg/J Storm IV	JU	13.63	10	Nat 1625M	250	250	Drilling
Marine Drlg/J Storm VI	JU	13.63	10	Nat 1625M	250	250	Drilling
Marine Drlg/J Storm XVI	JU	13.63	10	Nat 1320	200	250	Drilling
Reading & Bates/N J Guilbeau	P	13.63	10	Nat 1320	180		Drilling
MISSISSIPPI-UNDESIGNATED							
Marlin Drlg/Marlin No 6	JU	13.63	10	Nat 1625DE	300	300	Stacked
Marlin Drlg/Marlin No 7	SS	13.63	10	Nat 1625DE	300	1000	Stacked
MISSISSIPPI-PASCAGOULA							
Dixilyn-Field Drlg/77 Gulf of Mexico	S	13.63	10	Nat 1625DE	300	85	Under Repair
TEXAS-UNDESIGNATED							
Atlantic Pacific Marine/Gulf Commander	JU	13.63	5	C-E A800WE	140	100	Stacked
Blocker Drlg & Marine/Trinity Bay	B	13.63	10	Idco E3000	300		Stacked
Broughton Drlg/Broughton I	JU	13.63	10	Olwl E3000	300	105	Drilling
Cactus Intl/101	P	13.63	5	C-E Electrohoist II	250		Stacked
Cactus Intl/102	P	13.63	5	C-E C2	250		Stacked
Cactus Intl/163	P	13.63	5	C-E Electrohoist II	250		Stacked
Cliffs Drlg/1	B	13.63	10	MC U1220EB	300	18	Stacked
Diamond M/Rig 99	JU	13.63	5	Olwl E3000	300	300	Drilling
JFP Well Serv/JFP Five	JU	13.63	10	Olwl E2000	250	300	Drilling
Keydril/Key Manhatten	JU	13.63	10	Nat 1625	250	300	Stacked
Livingston Oilwell Serv/24	B	11.00	5	Wils Super Giant	120	12	Stacked
Livingston Oilwell Serv/40 Hyd Snubbing	P	4.16	10	Hydra LHD135T			Stacked
Livingston Oilwell Serv/41 Hyd Snubbing	P	4.16	10	Hydra LHD135T			Stacked
Loffland Bros/78	P	13.63	5	MC U1220BE	220		Drilling
Loffland Bros/79	P	13.63	5	MC U1220BE	220		Drilling
Marine Drlg/J Storm X	JU	13.63	10	Nat 1320	200	250	Stacked
Marlin Drlg/Marlin 3	JU	13.63	10	Nat 1625DE	250	250	Drilling
Nicklos Drlg/81	P			Nat 1320UE	200		Drilling
Ocean Drlg & Expl/Gulftide	JU	13.63	10	Nat 1625DE	250	250	Stacked
Ocean Drlg & Expl/Ocean Scout	SS	13.63	10	C-E C3 Type II	250	600	Stacked
Ocean Drlg & Expl/Ocean Tempest	DS	16.75	10	Nat 1625DE	250	600	Stacked
Penrod Drlg/Barge 44	B			Nat 1625 DE	300	10	Stacked
Penrod Drlg/50	S	13.63	10	C-E A1500E	250	50	Stacked
Penrod Drlg/51	S	13.63	10	C-E A1550E	250	60	Stacked
Penrod Drlg/52	JU	13.63	10	Nat 1320	250	250	Stacked

UNITED STATES (Cont'd)

Contractor And • Rig Name or No.	Type •	BOP Stack Size (ID) •	BOP Stack Pressure Rating, 1,000 psi •	Drawworks Make And Model •	Rated Depth With 4½-in. Pipe, 100 ft. •	Rated Water Depth, •	Status •
TEXAS-UNDESIGNATED (Cont'd)							
Penrod Drig/53	JU	13.63	10	Nat 1625DE	300	300	Stacked
Penrod Drig/55	JU	13.63	10	Nat 1625DE	300	150	Stacked
Penrod Drig/56	JU	13.63	10	Nat 1625DE	300	150	Stacked
Penrod Drig/57	JU	13.63	10	Nat 1625DE	300	150	Stacked
Penrod Drig/63	JU	13.63	10	Nat 1320UE	250	250	Stacked
Penrod Drig/70	SS	13.63	10	Nat 1625DE	300		Stacked
Penrod Drig/86	JU	13.63	10	Nat 1320UE	250	250	Stacked
Penrod Drig/85 Mobil	JU	13.63	10	C-E C3	300	210	Stacked
Penrod Drig/86 Mobile	JU	13.63	10	Nat 1625DE	300	210	Stacked
Rowan Co/Rowan Odessa	JU	13.63	10	Nat 1625	250	300	Stacked
Rowan Co/Rowan-Texas	JU	13.63	10	Nat 1320UE	250	225	Stacked
Santa Fe Drig/Blue Water No 2	S	13.63	10	Nat 1625DE	250	55	Stacked
Santa Fe Drig/Blue Water No 4	SS	16.75	10	C-E C3	250	1500	Stacked
Santa Fe Drig/Mariner 3	SS	16.75	10	Olwl E2000	200	600	Stacked
Sedco Underseas Drig/Sedco 471	DS	16.75	10	Olwl E3000	250	6000	Stacked
Service Equipment & Engrg/14							Stacked
Teledyne Movible Offshore/4	P	13.63	5	Nat 110UE	150		Drilling
Teledyne Movible Offshore/16	JU	13.63	10	C-E C3	250	250	Completion
Transworld Drig/73	S	13.63	10	Olwl E3000	250	100	Stacked
Western Oceanic/Alaskan Star	SS	16.75	10	C-E C3	250	1500	Stacked
TEXAS-ARANSAS							
Houston Offshore Intl/Nueces I	JU	13.63	10	Nat 1320UE	180	115	Drilling
Rio Grande Drig/1	B	13.63	5	Nat 110M	180	14	Drilling
TEXAS-BRAZOS							
Cactus Intl/182	P	13.63	5	C-E A1500	250		Drilling
Cliffs Drig/Jack-up #2	JU	13.63	10	Nat 1320UE	250	17/ 155	Drilling
Fluor Drig Serv/Rig 62	P	13.63	10	Nat 1320UE	200		Drilling
Keyes Offshore/Keyes - 200	JU	13.63	10	C-E C2	200	200	Completion
Marine Drig/J Storm XVIII	JU	13.63	10	Nat 1320M	250	250	Drilling
Noble Drig/Sam Noble	JU			Olwl E3000	250		Drilling
Noble Drig/29	P	13.63	10	Olwl E2000	200		Drilling
Nordrill Intl/Fjelldrill	JU	13.63	10	Nat 1625UE	250	250	Drilling
Zapata Offshore/Zapata Explorer	JU	13.63	10	Olwl 3000E	250	240	Drilling
TEXAS-CALHOUN							
MGF Drig/31	B	10.00	5	Olwl 76	120	8-10	Drilling
TEXAS-CHAMBERS							
Dixilyn-Field Drig/Barge 51	B	10.00	5	Nat 110		10	Drilling
TEXAS-EAST BREAKS							
Marlin Drig/Marlin 15	P	13.63	1	Nat 1320DE	200		Drilling
Marlin Drig/Marlin 16	P	13.63	1	Nat 1320DE	200		Drilling
Service Equipment & Engrg/15							Drilling
TEXAS-GALVESTON							
Atwood Oceanics Pacific/Vicksburg	JU	13.63	10	C-E C2	200	300	Drilling
CRC Mallard Well/Mallard 33		6.00			80		Workover
CRC Mallard Well/11	B	6.00	5	Wils 90	120	14	
Marine Drig/J Storm I	JU	13.63	10	Nat 130	200	225	Stacked
MGF Drig/37	B	6.00	5	G-D 500	90	8-10	Workover
Reading & Bates/Randolph Yost	JU	13.63	10	Olwl E3000	200	300	Drilling
TEXAS-GALVESTON BAY							
Cliffs Drig/Cliffs LaSalle	JU	13.63	10	Nat 1320UE	250	17/ 135	Drilling
Cliffs Drig/4	B	13.63	10	MC U1220EB	300	7'6- 18	Drilling
TEXAS-GULF OF MEXICO							
Keydril/Aleutian Key	SS	18.75	10	Olwl E3000	250	3000	Drilling
Western Oceanic/Western Delta	JU	13.63	5	Nat 80UE	150	173	Drilling
TEXAS-HIGH ISLAND							
Cactus Intl/165	P	13.63	5	Olwl E2000	250		Drilling
Chiles Drig/Gulfstream	JU	13.63	10	Nat 110UE	180	150	Workover
Dual Drig/29	P	13.63	10	C-E C3	250		Drilling
Dual Rig 25 Ltd/25	P	13.58	10	Olwl E3000	250		Drilling
Noble Drig/27	P	13.63	10	G-D 1100E	180		Drilling
Penrod Drig/32	P			Nat 1320UE	250		
Penrod Drig/61	JU	13.63	10	C-E C3	300	340	Drilling
Penrod Drig/68	JU	13.63	10	Nat 1625DE	300	330	Drilling
Penrod Drig/91	JU			Nat 1320UE	250		
Salen Protexa Drig/Salenergy III	P	13.63	10	MC U1220EB	250		Drilling
Transworld Drig/69	S	13.63	10	Olwl E3000	250	100	Drilling
Transworld Drig/70	S	13.63	10	Olwl E3000	250	100	Drilling
TEXAS-HOUSTON							
Rowan Intl/Rowan-Houston		13.63	10	Nat 1325UE	250	225	Stacked
Skinner Marine Operations/Skinner II	P	13.63	5	Olwl E2000	200	185	Stacked
Skinner Marine Operations/Skinner III	P	13.63	5	Olwl E2000	200	185	Stacked
TEXAS-INGLESIDE							
Glendel Drig/2-"Bob Werner"	JU	13.37	10	MC U914EC	180	110	Under Repair
Glendel Drig/1-"Bill Bailey"	JU	13.37	10	MC U914EC	180	110	Under Repair
Moran Drig/Morco II	JU	13.63	10	C-E C2	230	250	Stacked
TEXAS-JEFFERSON							
Phoenix Management/Big Foot Two	JU	10.63	10	G-D 2100E	250	85	Stacked
Phoenix Management/Rig #5-The Mr Ric	JU	13.63	10	G-D 2100E	200	100	Under Repair
TEXAS-KENEDY							
Merit Drig/2	B	13.63	10	Olwl E2000	250	20	Drilling
TEXAS-MATAGORDA							
Dixilyn-Field Drig/DF-86	JU	13.63	10	Nat 1320UE	200	200	Drilling
Keyes Offshore/Keyes - 250	JU	13.63	10	C-E C2	200	250	Completion

UNITED STATES (Cont'd)

Contractor And • Rig Name or No.	Type •	BOP Stack Size (ID) •	BOP Stack Pressure Rating, 1,000 psi •	Drawworks Make And Model •	Rated Depth With 4½-in. Pipe, 100 ft. •	Rated Water Depth, •	Status •
TEXAS-MATAGORDA (Cont'd)							
Marine Drig/J Storm III	JU	13.63	10	Nat 1625M	250	250	Drilling
Marine Drig/J Storm IX	JU	13.63	10	Nat 1320	200	195	Drilling
Nordrill Intl/Nordrill Steeler	JU	13.63	10	C-E C3	250	200	Drilling
Reading & Bates/Rig 40	P	13.63	10	Nat 1625	180		Drilling
Rowan Co/Rowan Paris	JU	13.63	10	Nat 1625	250	300	Drilling
Service Equipment & Engrg/21	P	13.63	1	Idco 2100	2500		Drilling
Zapata Offshore/Rig 34	P			Idco E3000			Drilling
TEXAS-MATAGORDA ISLAND							
Noble Drig/Ed Holt	JU			Olwl E3000	250		Drilling
Penrod Drig/30	P			Nat 1320UE	250		
Service Equipment & Engrg/3	P	10.00		Cbot 1267			Drilling
TEXAS-MUSTANG ISLAND							
Diamond M/97	P	13.63	5	Olwl E2000	250		Drilling
Keyes Offshore/Keyes 303	JU	13.63	10	C-E C3	250	300	Drilling
TEXAS-NUECES							
Glendel Drig/Mr Del #2	B	13.63	10	S/B NE12	250	20	Drilling
TEXAS-PORT O'CONNOR							
CRC Mallard Well/16	B	10.00	5	Wils 90	120	14	
TEXAS-SABINE PASS							
Fluor Drig Serv/Mr Gus II #55	JU	13.63	5	Nat 160E	250	150	Stacked
Fluor Drig Serv/Mr Sam #55	JU	13.63	5	G-D 1500RE	250	155	Stacked
Huthnance Drig/Acadian Spirit	JU	13.63	10	C-E C2	250	112	Stacked
Marlin Drig/Marlin 4	JU	13.63	10	Nat 1625DE	250	150	Stacked
Nordrill Intl/Gulfdrill	JU	13.63	10	C-E C3	250	150	Stacked
TEXAS-SAN PATRICIO							
CRC Mallard Well/Barge 5	B			Nat 80B	110		Stacked
TEXAS-TRINITY BAY							
Penrod Drig/Barge 46	B	13.63	10	C-E ECB	200	16	Drilling
WASHINGTON-UNDESIGNATED							
Associated Marine Serv/La Ciencia	DS			HT	15	500	Drilling
WASHINGTON-EVERETT							
Associated Marine Serv/Heron	DS			HT	15	700	Drilling

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5. Settling an Estate
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